

AIRFIX

magazine

FOR PLASTIC MODELLERS

OCTOBER, 1966

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IN
THIS
ISSUE

EIGHT MORE PAGES

AIRFIX FOR PLASTIC MODELLERS

magazine

Volume 8, Number 2

October, 1966

IN THIS ISSUE

NEWS FROM AIRFIX	Arado floatplane and Hawker-Siddeley Trident kits and latest slot-racing developments	36
IN THE AIR	Alan W. Hall describes Farnborough from the hot seat	38
MORE MATADOR CONVERSIONS	Norman Simmons 'civilises' some trucks from the Airfix kit	40
WHEELSPIN	Build yourself a slot-racing version of the MGB kit, as described by Bert Lamkin	42
MILITARY MATTERS	Peter Chamberlain starts the Sherman Story, a history of one of the widest-used AFVs	44
THE BUS THAT NEVER WAS	Mike Bryant concludes his two part article describing a model Garrett steam bus	46
A SPITFIRE TRAINER	A two-seat Spit converted from the basic Airfix kit by Chris Ellis	48
1066 AND ALL THAT	A figure conversion by C. Jones marks the 900th anniversary of the Battle of Hastings	50
AIRCRAFT KIT CONVERSIONS	Alan W. Hall makes a Malcolm Hood Mustang	54
MILITARY MODELLING	Hilary Doyle combines a pair of tank kits to produce a King Tiger	57
PHOTOPAGE	Blenheim, Mustang and Harvard pictures included in the latest readers' selection	60
PROFILE	M. J. F. Bowyer casts a critical eye at Farnborough 1966	62
NEW BOOKS	Latest publications of interest to modellers	66
NEW KITS AND MODELS	Latest releases reviewed for modellers	67
LETTERS TO THE EDITOR	The page where your views and ideas can win you a free Airfix kit	68

COVER PICTURE

A clash between British flying boats and German floatplanes occurred over the North Sea on June 4, 1918. The flying boats from Yarmouth and Felixstowe consisted of four F2As and one Curtiss H12 with mixed RNAS/USN crews. After one F2A had alighted on the water with engine trouble, it was attacked by five German floatplanes from Borkum. For an hour the British boats circled the crippled boat trying to ward off attacks until forced to form up to meet German reinforcements. This fine painting, by J. D. Carrick, depicts an incident during the engagement when Hansa Brandenburg W19 No 2239 exchanged fire with F2A N4533 on the water. It is reproduced by permission of Harleyford Publications Ltd, publishers of *Marine Aircraft of the 1914-1918 War*, by H. J. Nowarra. An article on early seaplanes, by Bruce Robertson will appear in our November issue.

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NEWS FROM AIRFIX

The world's greatest value in construction kits

● Arado Ar 196 A-3

● Hawker-Siddeley Trident

● Slot-racing news



Airfix's new Arado floatplane kit comprises 64 parts and sells for 3s 6d. We reckon that with balsa floats added, this one could really sail!

THIS month's two new Airfix releases are both aircraft, one joining the 1:72 scale Series 2 and the other added to the ever-growing 1:144 scale Series B. To the larger scale is a fine 45-part replica of an Arado Ar 196 A-3 floatplane, while the smaller scale aircraft is an impressive little 64-part miniature of Hawker-Siddeley's Trident 1C airliner.

The Arado was Germany's most successful floatplane to see service during World War 2, and was in wide use as a catapulted spotter plane operating from some of their larger warships. The Airfix model, which is attractively and robustly boxed, is moulded in a very pale blue plastic, with a transparent two-piece cockpit hood and display stand. Moving parts include adjustable ailerons, one-piece elevator and a revolving three-bladed propeller. A machine gun mounted in the rearward cockpit also elevates.

The cockpit canopy can be assembled either closed or open, with the upper part slid back, and the undercarriage assembly is extremely complex, with a maze of struts supporting two very large floats. Twin rudders are fitted to the floats to provide on-the-surface steering.

Moulded detail is good, with rivet and panel lines on the wings, fin and forward end of the fuselage, while a finely-etched fabric finish has been applied to the after end of the fuselage, the ailerons and elevator. A pair of light bombs are carried beneath the wings, and the interior of the cockpit is well-detailed, with an instrumented facia, control column and two-man crew. Colour transfers are also provided.

Prototype dimensions include a wingspan of 40 feet 10½ inches and a length of 36 feet 1 inch, and the model itself is just over 5¾ inches long, spanning 6½ inches. Good value again for just 3s 6d.

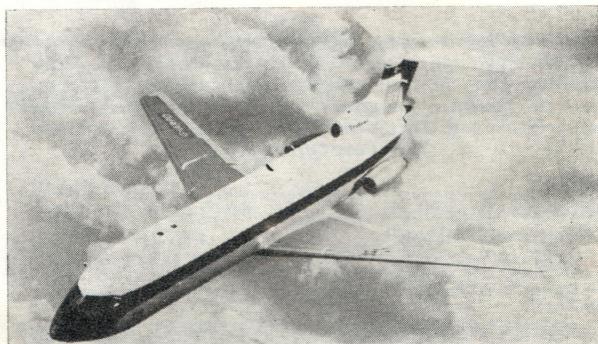
In real life, the Arado Ar 196 was first introduced in 1940, and was employed mainly in the coastal reconnaissance and patrol role. The A-3 version modelled by Airfix featured improved wireless equipment and armament, and this included twin cannon, three machine guns and a pair of light bombs. The two 20 mm cannon were mounted in the wings, while a fixed 7.9 mm machine gun fired through the propeller arc from the starboard side of the nose. Another pair of similar-calibre machine guns were mounted flexibly in the rearward half of the cockpit, and two 110 lb bombs were carried under-wing. A 900 bhp BMW radial engine was employed, and this gave the aircraft a top speed of 195 mph, coupled with a useful cruising range of 670 miles.

● JOINING what was formerly known as the Skyking series of 1:144 scale airliners is the Hawker-Siddeley Trident, and this handsome 64-part model is moulded in pale grey and transparent plastic, featuring quite a lot of fine detailing and a number of moving parts.

The full ten-wheeled undercarriage can be made to revolve, and a working variable incidence tail-plane is featured. The six access and cargo doors can be assembled in either the open or closed position, as can the undercarriage well doors, and a three-part 'airstair' is provided to complete a static, parked display. Alternatively, the model can be assembled as a 'flying' replica, with undercarriage retracted and doors closed.

Well-moulded transparent cabin window sections provide a touch of realism, and the flight-deck windows fit very nicely into their cut-out. The characteristic three-engined arrangement of the Trident is depicted, with outrigger engine pods on either side of the tail unit and a single 'bulged' mounting on top of the fuselage at the rear, exhausting through a fluted tail pipe let into the extreme end of the tail. All the control surface division lines have been

The latest 1:144 scale airliner to join the plastic construction kits ranges is this fine 7 3/8 inch span Hawker-Siddeley Trident, selling for just 2s 6d.



AIRFIX magazine

moulded into the wings and tail-plane, and a number of antennae sprout from the aircraft's otherwise exceptionally smooth outline.

A useful moulding feature is that the part numbers of some of the items that might be easily muddled have been etched into the plastic.

Comprehensive colour transfers included with the kit give authentic BEA livery for the Trident, and the usual full painting and assembly instructions are provided. This kit, which should prove popular, is priced at 2s 6d.

Developed as a short to medium range airliner, the Trident was designed by de Havilland as the DH 121. It made its maiden flight in January 1962, went into service with BEA in March 1964, and soon proved both extremely popular with the passengers and economic to run for the airline. BEA now has a fleet of 24 1C versions, and with their three 9,850 lb thrust Rolls-Royce Spey engines, they have a cruising speed of about 600 mph carrying a maximum of 102 passengers.

The Trident 1C has a wing-span of 89 feet 10 inches, and an overall length of 103 feet 6 inches. In 1:144 scale, the Airfix model spans 7½ inches and is just under 9½ inches in length.

AIRFIX'S model car racing contest, which ran for four weeks at Gamages in Holborn recently, was a great success. First prize winner was 22-year-old slot-racing fan, Michael Billing, of Worth, Kent, and he really cleaned up by also taking model car prizes for the best performances recorded on six separate days.



Formula 3 stars versus slot-racing experts at the Gamages track. From left to right are Charles Lucas, Roy Pike, Piers Courage, Michael Billing and Peter Mark.

Michael's first prize was an all-expenses paid trip for two to Brands Hatch on August Bank Holiday Monday to see the International Guards Trophy race meeting, and there, among the other winners that day, he saw Piers Courage win the Formula 3 race by a large margin in his Charles Lucas-Team Lotus-entered Lotus 41. Earlier, at Gamages, Michael had been presented with his prizes by Piers and his American team-mate, Roy Pike.

The car Michael drove in his successful races was an Airfix Clubman Special BRM, and his other prizes included Maserati, Cooper, Lotus, Porsche, Ferrari and Vanwall slot-racing cars and a £5 Gamages gift token. Runners-up were Peter Mark of London, and Roger Willmott of Sidcup, who received £3 and £2 tokens respectively.

CHANGE OF ADDRESS

Would readers kindly note that, from October 10, 1966, the Editorial Department of Knightsbridge Publications (1962) Limited—publishers of Airfix Magazine—will be combined with their London Office and Advertisement Department in additional accommodation at 3/4 St Andrew's Hill, London, EC4 (Telephone: City 4288), to which address all future correspondence should be sent. From that date, the Knightsbridge Publications offices at Brands Hatch will no longer be in operation.

Other slot-racing news is of the new commercial circuit to open in this country at the Beatties' Raceways shop in The Broadway, Southgate, and Airfix played a large part in its preparation. It was designed and built under Airfix's guidance, and the six-lane circuit is 84 feet long and suitable for either 1:32 or 1:24 scale cars. With full electronic lap recording and MRRC high-quality hand controllers, time can be bought on the circuit for only 6d (or 1s during peak hours) for five minutes running. For those without their own cars, Airfix Clubman Special BRMs will be on hire at 1s per session as well as a variety of other more standard production slot-racing cars. Beatties' well-known hobby shop is right opposite Southgate tube station in North London, and the Raceways building is just round the corner from that.



The new Beatties Raceway circuit opened recently in Southgate. With a lap length of 84 feet, the basic figure-of-eight shaped circuit was designed by one of Airfix's slot-racing experts, and MRRC self-adhesive copper tape has been used on the lanes. Clubman's Special BRMs are to be used as house hire cars.

IN THE AIR

by Alan W Hall

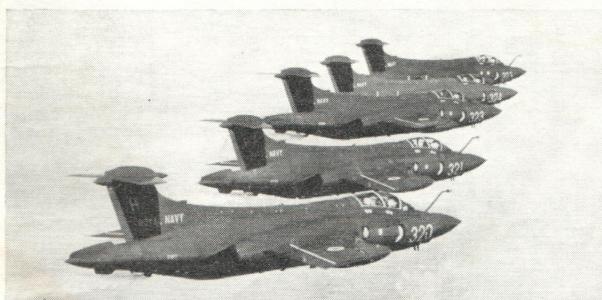
THE most impressive part of the SBAC show at Farnborough this year, to me at any rate, was the contribution by the Royal Navy. After the impressive demonstrations staged in 1964 by all three services, this year's contribution was perhaps a little tame, but it did emphasise one thing, and that was that the Royal Navy has some pretty powerful weapons in the Fleet Air Arm.

For the spotter, pride of place must go to 809 Squadron's Buccaneer S2s, as it was the first time we have seen these aircraft in squadron markings and in strength at a public display. The whole naval contribution came from the air group carried by HMS *Hermes*. Apart from 809's Buccaneers, the Sea Vixen 2s of 892 Squadron, the Gannet AEW 3s of 849 Squadron 'B' Flight and the Wessex HAS 1s from 826 Squadron, took part.

Having seen the 13 minute show from the runway side for most of the week, I took part in the demonstration on the final day by riding in the back seat of one of 809's Buccaneers. If you thought the flying was impressive from the ground, I can tell you that it looks and feels far more nerve-racking from the air!

My day started with a very pleasant ferry trip by Wasp helicopter from Farnborough to Yeovilton, where the *Hermes* air group was temporarily stationed. The pilot, Lieutenant Cavalier, was an old friend in a way, as he has recently taken over as pilot of the Wasp on board HMS *Aurora*. Readers will remember my report on helicopter operations from this ship earlier in the year.

Briefing for the flight started as soon as I arrived. A



Five of the Buccaneer S2 aircraft which took part in the Royal Navy's demonstration at this year's Farnborough Show. The aircraft, which belong to No 809 Squadron from the HMS *Hermes* Air Group, are painted dark grey overall, with codes and serials in light blue. The serial of the aircraft nearest the camera is XT 277. (Photo by Lt T. W. Ling RN, 809 Sqn.)

medical was followed by instruction on the emergency equipment, which included the latest mark of ejector seat. This has the capability of being fired under water should the aircraft have to ditch. Dinghy drill and survival operations were also explained in detail by two chief petty officers who seemed to have a delight in telling all the horrible things that could happen if the various bits and pieces didn't work. Having thoroughly demoralised me, they assured me that they had never heard of any of their equipment not working properly, just as I had one foot through the door!

Introductions to the squadron and my pilot, Lieutenant Morton, followed. We were given more briefings on what to do if anything went wrong and then, looking and feeling rather like a Christmas tree, we went out to the aircraft to get strapped in. Getting into any modern aircraft of this type is a long and seemingly complicated job to the uninitiated. It looks so simple from the outside, but my ample 'tum' and several cameras added to the complications of reaching for leg restraints, firing pins for the ejector seat and all the other bits and pieces necessary to ensure that one is firmly associated with the aircraft.

Tagging along behind 10 Sea Vixens, the six Buccaneers of 809 were the second group to get airborne. Flying through cloud up to a height of 6,000 feet, we quickly joined up with our companions, and as 'Buccaneer 3' Lieutenant Morton quickly had his aircraft into the right slot, and after photographing the Sea Vixen formation we headed from our Lyme Bay rendezvous point for Farnborough.

One of the secrets of the slickness of the flying display at Farnborough is to have the aircraft taking part ready some time before they are due to appear. This involves some complicated flying outside the exhibition area, in our case over RAF Odiham, before actually going 'on stage'. For 15 minutes the 16 aircraft of the formation flew round in wide circles over Odiham at 2,000 feet and then the show was on.

A mass fly-past of all aircraft started the Navy's demonstration. During the week I had watched the helicopters and Gannets fly over at the same time as the rest of the jets, but from 'Buccaneer 3' they were nowhere to be seen. This just emphasises how difficult it can be to spot other aircraft flying below, and how good a lookout for strangers must be kept by the leading aircraft. Readers may recall press reports that the formation jumped a light aircraft during one of the fly-pasts. The comments on the ancestry of the pilot both on the radio and afterwards were not complimentary!

After a wide circuit of the airfield the Buccaneers, less one of their number who joined with a Sea Vixen in a mock LABS manoeuvre, rejoined with undercarriage, flaps, arrester hooks and dive brakes down. Breaking to the right they then went into a very fast run which just showed how fast this powerful aircraft could go. The effect was terrific as the 'G' forces built up, and I was surprised to learn when we landed that the greatest we had pulled up was no more than three G. My 'tum' thought that it was much more, and I'm ashamed to say that it let me know it! Yeovilton's runway was a welcome sight when we returned 15 minutes later...

My impressions of the Buccaneer 2 are ones of exhilaration at the tremendous power available. The push as one accelerated down the runway and the forward pressure as the dive brakes were extended showed how the aircraft



Above: Swissair's DC9-10 seen at Gatwick at the time of the press demonstration in August. The aircraft bears the registration lettering HB-IFA.



Top: The P-51D Mustang, serialled N6356T, which belongs to a new air museum which has just been established at Biggin Hill. The museum owes its foundation to Mr Tony Osborne, a director of Intercean Airways of Luxembourg, and a site has been allocated at Biggin Hill for the erection of a large new hangar to house the exhibits. Other aircraft rumoured to be on their way include a Valiant from Vickers at Weybridge, a Comet 1, a Seahawk, a Swift and a Harvard. The Mustang was, apparently, flown into Biggin by Osborne himself. **Above:** Second of the museum's original exhibits is this Sea Fury, WJ288. There's quite a story behind the delivery of this one, for apparently it was towed to Biggin from Dunsfold airfield behind a Land-Rover. It is said that the insurance company of an irate car owner who parked his vehicle in narrow Guildford High Street will not believe that it was damaged by an aircraft that passed on its way to Biggin Hill in the dead of night! could be quickly accelerated or slowed down as required. It was also a very stable mount. I was told that there was a fair amount of turbulence, but compared to my experiences of light aircraft aviation, it was hardly noticeable. The cockpit was roomy for its size. The instruments were easily reached, and there was sufficient room in the depth of the cockpit to allow the seat to be raised or lowered in flight by about six inches. From the photographic point of view the observer has a rather awkward (though necessary) wind-shield in front of him, which is designed to give some

protection should the canopy have to be jettisoned. Although my stomach would disagree, this flight was without doubt the highlight of Farnborough '66 for me, and my thanks are due to the officers and men of No 809 Squadron for their help and understanding.

FROM SPEED TO COMFORT

WHEN compared to the Buccaneer, the standards of comfort set by the newest addition to the aircraft using London's airports leave nothing to be desired. I refer, of course, to the recent introduction of the Douglas DC-9 into service by both Swissair and KLM. Visits by the DC-9s of the latter will for the time being be rare, but commencing on August 19 Swissair introduced their latest aircraft into regular day flights between London and Basle/Zurich. They will also be operating on London (Gatwick)-Zurich night flights, alternating with Caravelle and Coronado jets until the end of this month when they will take over the service entirely.

I was fortunate enough to be included in the press party that took part in the first UK flight of the DC-9 from Gatwick, and was very impressed by the excellence of service and comfort of this, the latest contender in the 'bus-stop' type of jet transport. Having flown in both the BAC-111 and the DC-9 I am sure that the potential passenger will find little, if any, difference between the two. Both have the ease of ground handling associated with this latest generation of transport aircraft; both have approximately 75 seats and both provide maximum comfort for their passengers. As far as this latter point is concerned, I thought that the DC-9 had the edge on its British rival. I liked the seemingly greater leg room, but most of all I appreciated the new style of overhead baggage rack, which I am sure will be a winner with the frequent air traveller who by now has grown accustomed to having his hand baggage stowed around his feet because of the risk this creates when stowed above his head. The DC-9 has a new type of rack with lockable doors into which small articles for personal use may be placed.

Swissair's DC-9s have what I call *real* luggage racks. They are wide enough and deep enough to hold almost everything that the passenger usually carries, such as brief cases, cameras and so on. The risk that these objects might become displaced in rough weather or heavy landings is obviated by a wired guard-door which is locked by the cabin staff after the passengers have taken their places. Obviously this does take a little longer before the aircraft can depart, and the stewardesses tend to rush up and down the cabin before take-off, but the advantages are overriding and the innovation is just one more step in the closely-contested battle to win over the passenger. BEA would do well to look into the possibility of extending this advantage to *their* passengers.

The demonstration flight from Gatwick, which lasted for just on half an hour, showed how quickly the DC-9 could get to its operating height of 30,000 feet and also how quickly it could descend into the airport pattern . . . a useful advantage in present day operations where a 30 minute flight is quite normal. The DC-9's ability at a quick turn-round was also demonstrated by the fact that a second party were waiting for a ride after the press had left. By the time I had left the aircraft and found my way on to the top of the Gatwick piers to take a photograph, Swissair's new jet was already 'winding-up' for its second departure!

CHRIS ELLIS has been quick off the mark (*last issue—Ed.*) with conversion subjects for the Airfix AEC Matador kit introduced last month. I have been investigating the civilian applications of this kit and the following description and photographs of a two-axle platform lorry are the result of preliminary experiments. The model will be of interest mainly to readers wishing to add a lineside vehicle to a 4 mm scale model railway or roadway layout though, of course, there are many other kinds of scenic work where a truck will come in useful, not forgetting 'commercial' airfields.

First, I wish to make it clear that this conversion is for a lorry of no specific prototype although, because it has an AEC radiator, it looks rather like an AEC Monarch of pre-war vintage. It does not represent an ex-military Matador sold as surplus and converted for civilian use although, of course, such conversion possibilities exist and may give rise to a further article at a later date.

First thoughts on looking at the assembled Airfix AEC Matador were the large size of the military tyres. Normally civilian lorries have much smaller tyres both in diameter and in cross-section or thickness and without such a heavy tread pattern. It is perfectly easy to turn down these Matador wheels and change the tyres to a civilian pattern as I was able to prove and hope now to describe.

HAND LATHE

I used a hand drill held in a vice and skimmed the wheels down by turning the drill handle with one hand and holding the point of a $\frac{1}{2}$ inch chisel against the wheel with the other hand. There is, of course, nothing new in this idea of using a hand drill as a basis for an improvised lathe but this is the first time I had tried the method and I was pleasantly surprised to find how easy it was. The Airfix tyre and wheel was held in the chuck of the drill by a $\frac{1}{2}$ inch 10 BA bolt which was pushed through with the head of the bolt on the inside of the wheel and secured with a 10 BA washer and nut on the other side. The nut and bolt were tightened as much as possible to avoid the wheel slipping when pressure was brought against it. A 10 BA bolt, by the way, is a perfect fit in the axle hole of these

MORE MATADOR CONVERSIONS



Civilian lorry built from Airfix Matador kit, with standard military model (left) for comparison.

wheels. So perfect, in fact, that it was nearly always necessary to screw the bolts into the wheels.

A tool rest was improvised out of a block of wood clamped to my work-bench in such a position that, with the chisel resting flat on the wood, the point was against the wheel being turned.

Begin by skimming the back of the wheel to reduce the thickness of the tyre to about 3 mm. In practice this means making the whole of the back of the wheel flat and when this state has been reached it should be the right thickness. Now attack the edge of the wheel and reduce the diameter to about 13 mm. When this has been done just sufficient tread pattern is left on the edges of the sidewalls to look realistic.

All six wheels in the kit are required, including the pair intended for the 5.5 inch gun since double rear wheels are fitted to this type of lorry.

The technique required for wheel turning this way is better experienced than described. Suffice to say that after the first timid approach one can become quite adept and, by judicious movement of the chisel point against the wheel being turned, it is possible to obtain exactly the right profile. I found it best to turn the drill handle anti-clockwise as this ensured that the chuck gripped the 10 BA bolt firmly. Occasionally the chuck or the nut and bolt may work loose. I have even broken one or two 10 BA bolts but at $7\frac{1}{2}$ a dozen this is not much to worry about. The most



of one of the latest Airfix releases

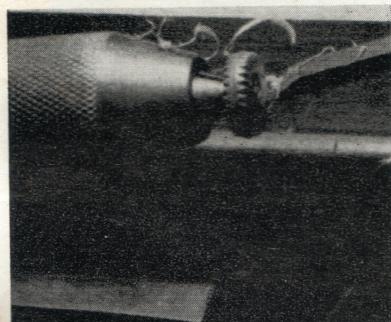
important thing is that I haven't ruined any wheels!

This 'lathe' work is certainly very satisfying as the plastic skims off in a thin unbroken strip and one can visibly see the wheel changing shape with every deft move of the chisel. It is, perhaps, as well to stop every so often to avoid overheating the plastic and to check the dimensions, but even with these enforced breaks you will find after a little practice that each wheel need not take more than about 5-10 minutes to do. The difficult job is sizing them all up and ensuring they are all the same diameter. Finally, after the chisel has done its job, lightly rub over the wheel with a piece of sandpaper.

CAB AND CHASSIS

The little truck's cab was built as described in the Airfix instruction sheet except for the roof and the rear window. The rear window is already marked out on the back panel of the cab and only needs cutting out. The roof in the kit was discarded altogether and a roof of 0.30 inch plastic card was substituted. After cementing in place, the roof was carefully rounded along the edges and corners with a fine file and sandpaper. A small owner's nameboard, cut from 0.10 inch plastic card, was cemented to the top of the roof just above the windscreen. Such a nameboard can, of course, be any shape or size to suit your fancy or perhaps the amount of lettering which has to be included.

Before assembly of the chassis, remove the front towing hook and the winch between the chassis frames. Assembly of the chassis is as described in the instruction sheet excepting that no front-wheel drive or winch prop-



shaft is required. The front axle drive housing also has to be cut away from the front axle.

I have not found it possible using existing parts to make the wheels revolve on this conversion and the double rear wheels are simply cemented in place. Brake drums turned from 0.30 inch plastic card were cemented to the ends of the front axle to increase the track of the front wheels. The front wheel hubs were filled with plastic putty and built up to represent the typically domed shape familiar in most commercial vehicles. The mounting ring on the centre of the hub, which is such a prominent feature of AEC vehicles especially, was represented by a 10 BA washer glued in place.

THE BODY

An unlimited variety of bodies can naturally be fitted to this chassis but the simple platform with headboard is perhaps the most common type to be found and is certainly the easiest to make. I used the Matador body floor, part 17, as the basis on to which was cemented a piece of 0.10 inch plastic card cut the overall length and width; ie, $2\frac{3}{16} \times 1\frac{7}{32}$ inches. The card was

Turning Airfix Matador wheels, to convert them for civilian use, with the aid of an improvised lathe made up from a hand drill held in a vice. Tool used is a $\frac{1}{8}$ inch chisel held on makeshift tool rest. This shot shows the first cut in reducing the thickness of the wheel—diameter has also to be reduced.

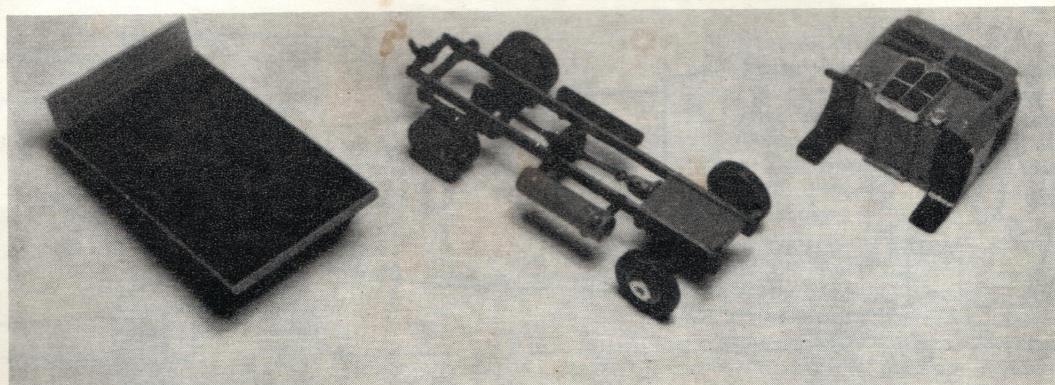
scored at 2 mm intervals to represent planking. Sides and the rear end of the platform were made from 2 mm strips of 0.20 inch plastic card and the headboard was a 10 mm deep strip of 0.10 inch card again scored to represent planking.

The front chassis dumb irons were cut back to a point just forward of the axle spring mountings. Headlamps pressed out of 0.30 inch plastic card with a leather punch were cemented to the front of the cab just above the chassis dumb irons. To complete the model, number plates cut from 0.10 inch plastic card can be cemented to the off-side mudguard at the rear and beneath the radiator in the front.

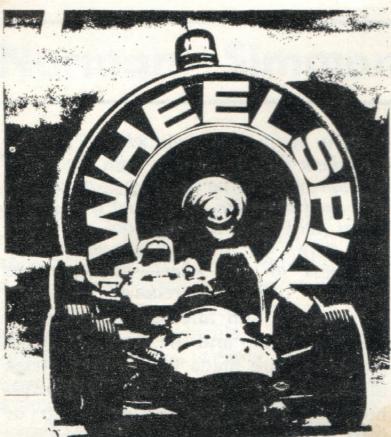
Unlike the military model, the radiator can be painted black and silver with the AEC badge picked out in red and blue. This should be done before fixing to the cab front and ideally before removing it from the stem. Wheel hubs, cab and body parts are also best painted before assembly to the chassis. My model is painted blue with matt black chassis, tyres and body floor and glossy black mudguards but of course there are endless possibilities for painting and lettering such a model.

There will be quite a number of spare parts left over from your Airfix Matador kit after assembly of this model which at first sight might appear wasteful but by any standards, 2s 3d is a small price to pay for a 4 mm scale lorry and I know of few alternatives currently available.

Left: Offside view of civilian lorry.



Right: Components of the civilian Matador—body, chassis and cab.



BY BERT LAMKIN

Motorising the Airfix MGB

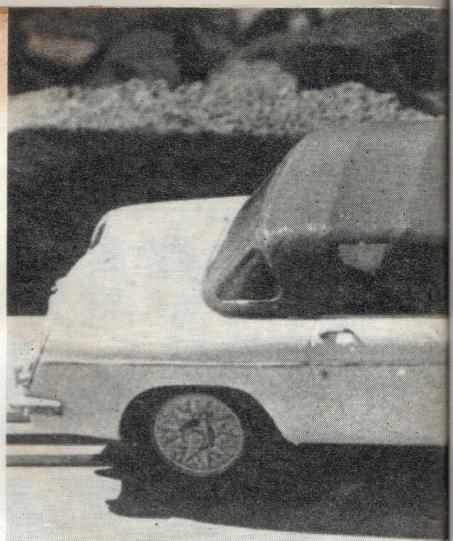
TO keep right up-to-date with full-size motor racing on our slot-tracks, we should include races for Marque sports-cars. These are cars of selected makes which are generally available as production performance vehicles, and, for our purposes, the new issue from Airfix of the MGB and TR4 are just the thing.

As these cars would not normally have the speed of a formula racing car, the standard Airfix motor can be used. In motorising the MGB, it is intended to be a straightforward case of cutting and cementing only. This entails the use of many pieces from existing Airfix slot-racers.

For the chassis, the lower halves of two Formula 1 cars are used. I happened to have these spare, a Ferrari section providing the rear portion complete with locations for motor and rear axle, and an Auto-Union part is used for the front end.

They are cut down to give the correct wheelbase for the MG, and are then cemented together butt-ended, the joint being reinforced with a piece of scrap plastic. The rear end has to be shortened by half an inch, see sketch A.

The next stage entails fitting retention pieces for the front and rear axles, which are, of course, standard Airfix units. The retainers are, in fact, small U-shaped pieces of plastic, as shown in sketch B. Two are cemented over the nylon bearings at the back, and one goes over the rear pivot of the front axle. The front pivot will be retained by the chassis itself when the assembly is complete. Incidentally, I



fit the pick-up braids before anchoring the front axle. Normal tyres also have to be fitted to the rear wheels, as the arches in the MGB body are not big enough to accommodate the GP rears.

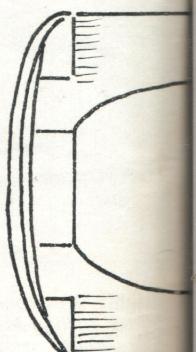
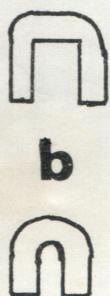
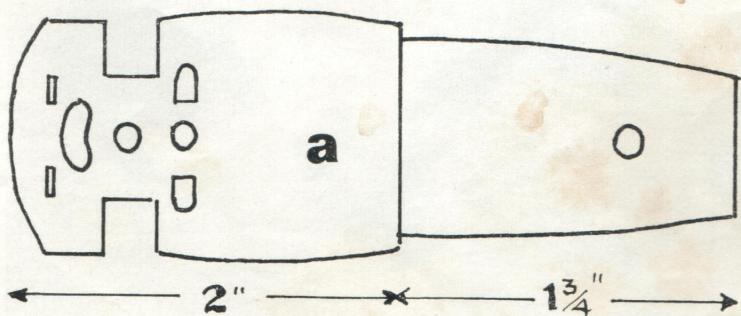
Next step is to take part 8 in the kit, and cut away the middle section so that it fits closely over the fabricated chassis. The moulded well in the boot will also need cutting to clear the concentrate gear, see sketch C. Slip the modified part 8 into the body, then fit the assembly over the chassis. The wheel centres should be in line with the bottom edges of the doors.

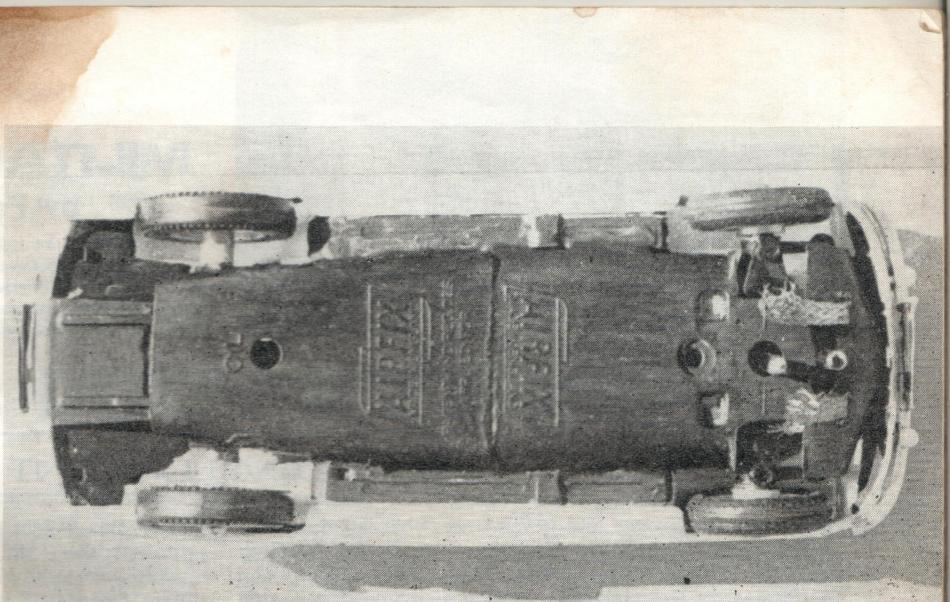
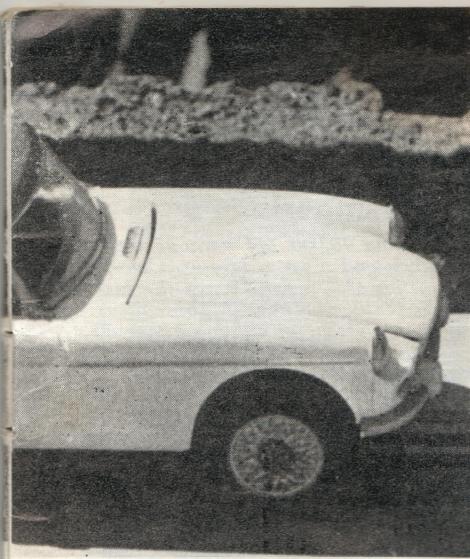
With the body and chassis correctly lined up, run cement along the join between part 8 and the chassis, and also at the front where the two meet. Let this set thoroughly before removing the body. In the meantime, the dashboard can be painted, and the steering wheel attached. The various other parts that will be used can also

be painted. These are numbers 20 and 46, the frames of 47, 48 and 49, the bumpers (parts 59 and 60), and door handles, 56, 57 and 58. The backs of parts 52, 53, 54 and 55 are also painted as per the instruction sheet. For the head-lights, a small piece of chromed strip cut into two discs and fitted to the body underneath the transparencies will give a better effect than silver paint.

While the body is off, cement the radiator in place, and fit the bonnet according to the instructions. With this particular car I dispensed with the luxury of a detachable body, so before adding the trimmings, I refitted it on the chassis and cemented it in place.

To retain the Airfix motor, two 'L' shaped pieces of sprue were cemented to the chassis on either side. When they had set completely, the finished chassis was given a thorough test run.

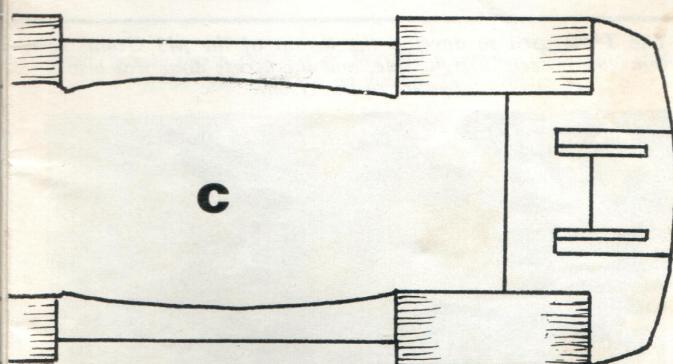




Above, left: The completed conversion, ready to take on the opposition. Racing numbers and stripes can be added to choice.

Above: Chassis for the MGB motorisation is based on those used in the Airfix Formula 1 cars.

Left: What the real thing looks like. An MGB, in full racing trim, taking part in a marque sports car race at Brands Hatch circuit.



Left: Some of the points of construction are shown in these three drawings, which are keyed and referred to in the text.

Final stages of the conversion begin with fitting the dashboard. A small piece of plastic card, approximately $1\frac{1}{2}$ inches by 1 inch, is cemented to the inverted 'L' pieces that hold the motor. This forms a false floor, and the Airfix driver, somewhat reduced in size, is glued to this.

The bumpers, windscreen, soft top and so on can now be fitted if desired, and finally, when the cement is quite set, self-adhesive competition numbers or transfers can be added. And there you are, ready to run your first slot-racing Marque sports-car.



MILITARY MATTERS

by Peter Chamberlain

The Sherman at war; more than 40,000 M4 variants were built, becoming the best-known and most widely used tanks in the world. The series starting this month traces the history and development of this famous tank, while subsequent articles will deal with more important military equipment.

THE SHERMAN STORY

PART 1: DESIGN AND DEVELOPMENT

TO trace the lineage and development that led up to the Sherman, we must go back to 1938, to the Medium Tank T5 which was built at the Rock Island Arsenal. The T5 (Phase I) was designed to employ as many of the same parts of the then standard US Army M3 Light Tank as possible. The T5 had vertical volute suspension and was powered by a Continental radial air-cooled engine of 250 bhp, the superstructure of this vehicle consisting of a barbette and turret. Armament was as follows: 37 mm gun in turret, 4 x .30 calibre machine guns, mounted singly in small sponsons on each corner of the barbette, and two fixed .30 calibre machine guns in the hull front.

From the Medium Tank T5 (Phase III), which was similar to the T5 (Phase I) but had wider tracks and a more powerful engine (Wright radial R-975) and weighed 21 tons as against the 15 tons of the T5 (Phase I), was developed the Medium Tank M2 of 1939. This vehicle was a modified version of the T5 series, still employing parts of the M3 Light Tank. It was armed with a 37 mm gun in the turret, and with no less than eight machine guns mounted in the barbette and hull. The next model to follow was the Medium Tank M2A1, which was an M2 with a redesigned turret, retaining the same layout and armament as the M2. Although the M2A1 was standardised in 1940, it was already technically obsolete as it was known that the Germans were mounting guns of 7.5 cm calibre in their tanks (eg Panzerkampfwagen IV).

At a meeting in August, 1940, between the Chief of the newly formed Armoured Forces and representatives of the Ordnance Department, the specification of a new medium tank was planned. It was to be a tank with heavier armour mounting a 75 mm gun, and it was proposed that this should be turret mounted. However, as insufficient development work had been done on the problem of mounting a

gun of this weight in a turret, it was decided to use as a prototype the T5E2 medium tank, since experiments had already been carried out on this vehicle (which was the T5 Phase III) in 1938 when a 75 mm pack howitzer had been mounted in the modified right sponson. It was, therefore, agreed that the projected new medium tanks would mount the 75 mm gun in a sponson on the right side and that the T5E2 would serve as a basis for this new series of medium tanks. The resulting vehicle was the Medium Tank M3, which weighed over 31 tons and was armed with a 75 mm M3 gun in the sponson, one 37 mm gun M6 and coaxial .30 machine gun in the turret, an AA .30 machine on the turret cupola, and another machine gun in the hull front. Track suspension was still of the vertical volute type.

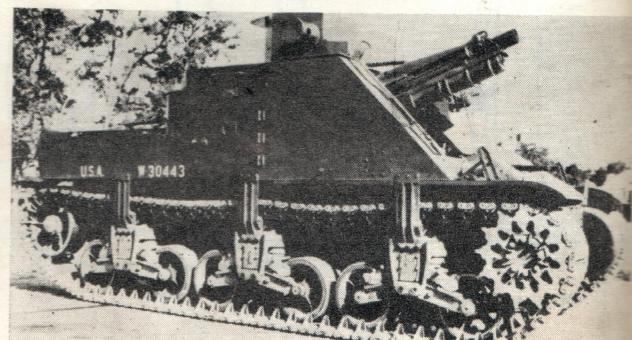
The pilot model of the M3 was ready by January, 1941, and production vehicles began to come into service by the middle of 1941. These were the first American medium tanks to be produced in quantity under the defence programme prior to the entry of the USA into the war. They were subsequently supplied to the British and Russian forces as lease-lend material. In 1940 the British Government contracted directly with the Baldwin Locomotive Works, Lima Locomotive Works, Pullman Standard Car Co, and the Pressed Steel Car Co for the manufacture of the M3. In the same year the Canadian Government contracted with the Montreal Locomotive Works Division of the American Locomotive Corporation for the production of 1,157 medium tanks based on the design of the M3. The Canadian-built M3 was called Ram Mk 1.

The M3 was the first of the US tanks to employ gyro-stabilisers and power-traversed turrets with integral fighting compartments. Battle experience in Russia and Libya suggested improvements, some of which were introduced as production continued. The M3 and M3A first saw action

Progenitor of the whole M4 series was the T5. Phase I version is shown here.



The T5E2 used to develop the layout of the M3 Grant. 75 mm gun is seen in right side, and the access door was also a feature of the Grant.





Examples from the Grant tank series are the M3A1 which had a cast hull, and the M3A2 with riveted hull.



Tanks Medium M2 and M2A1 show clearly the hull form that the M3 was to take. Note main armament of 37 mm gun.



with British forces at Sidi Rezeg in Libya in November, 1941, but while mechanically reliable the limited traverse of the 75 mm gun in the sponson proved a grave disadvantage. In April, 1944, the M3 was finally declared obsolete by the US Army.

There were six basic production types of the M3 Medium:

M3: This was the original vehicle of the series, it had a riveted hull and was powered by a Continental (Wright) R-975-EC2 or R-975 petrol engine.

M3A1: This was similar to the M3 but had a cast hull.

M3A2: Again similar to M3 but with welded hull.

M3A3: With welded hull but powered with twin General Motors 6-71 diesel engines.

M4A4: Riveted hull and Chrysler Multibank engine.

M4A5: Riveted hull and twin General Motors 6-71 diesel engines.

The M3 crew consisted of six men; the driver and radio operator occupied seats forward in the hull. The 75 mm gunner sat on the left side of the gun mount. The 37 mm gunner and gun loader with the commander were seated in the turret. Forty-six rounds were carried for the 75 mm gun, and for the 37 mm gun there were 178 rounds. There were also 10,400 machine gun rounds. The US version of the M3 was known as the General Lee, and the British-modified version as General Grant. Both types were used by the British.

In the meantime design work had begun in 1940 on a project of mounting a 75 mm gun in a turret and developing a vehicle utilising as many Medium Tank M3 parts as possible. This completed vehicle materialised as the Medium Tank T6, of which the prototype appeared on September 16, 1941. The T6 had a cast hull and turret and

mounted a short 75 mm M2 gun in the turret. The 75 mm gun had two muzzle weights on the end of the gun muzzle, and these were intended to simulate the weight of the longer 75 mm M3 in the production models. There were two fixed and one flexible machine gun in the bow. The vertical volute spring suspension had the track return rollers mounted at the top centre of the bogies, and some of the early production models of the M4 had these features, one of them being the M4 *Michael*, which was on show in 1942 at the Horse Guards Parade. The T6 was standardised in October 1941, and became the M4. By early 1942 it was in full production. It was first used in combat by the British 8th Army at El Alamein in October, 1942, and soon after by the US forces following the Torch landings in Algeria in November of that year. It was to become the main combat tank of both US and Allied armoured forces in the years ahead, total production exceeding 40,000 units.

Called General Sherman by the British, it served eventually on all fronts and was delivered also to Russia, the Russian model being designated M4c. The M4 introduced a large number of improvements over the M3 series, which the Sherman at first supplemented and then replaced. The 75 mm M3 gun was mounted in a power-operated turret providing 360 degree traverse and greater elevation and depression than was possible in the M3. The silhouette was lowered by the elimination of the turret cupola (unlike the M3), thus making the M4 a less conspicuous target. The 37 mm gun was also, of course, eliminated and the crew decreased to five, including an assistant driver. Rounds carried for the 75 mm gun were 97 and consisted of HEM48, APM72, and APC.

(To be continued next month)

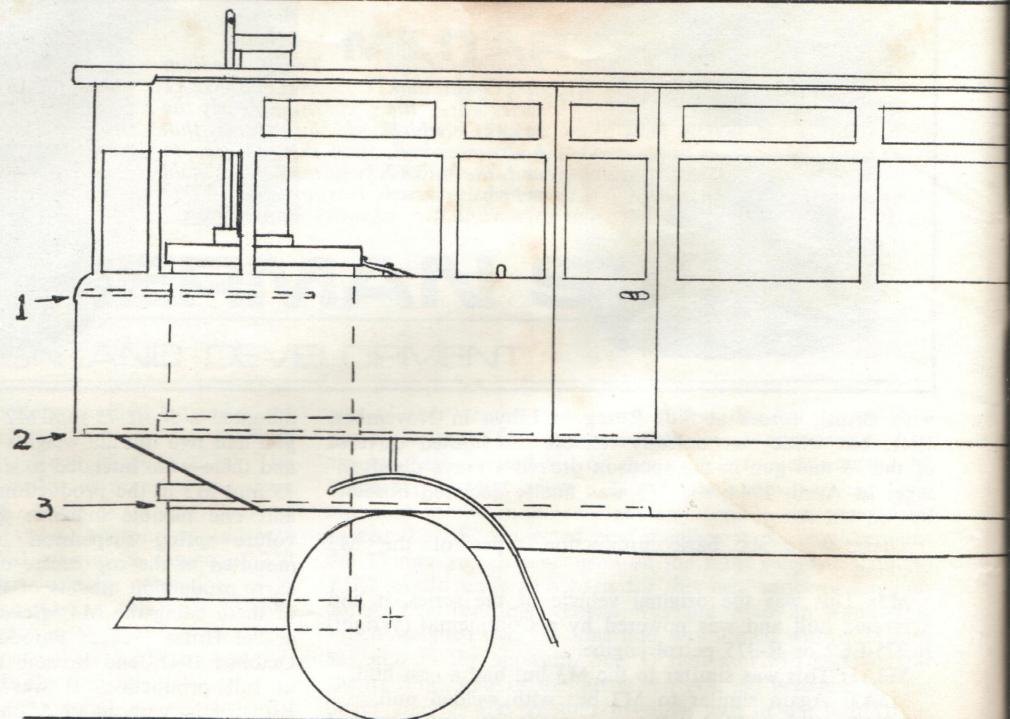
The T6 was the prototype of the M4 Sherman. Note the side door and weights on barrel. (US Official.)



A late production M4, in British service. Airfix model is based on this type. (Warpics photo.)



The bus that never was



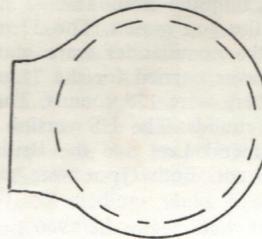
CONTINUING where we left off last month, the next step was the chassis proper: the side members were cemented to the underside of the floor, but not in the position indicated in the Airfix instructions. For this model, the back of each side member came 9 mm from the rear edge of the lengthened floor, and the flange at the front of them just overlapped the front edge of the floor by a millimetre or so. The floor-well under the cab was extended in 0.03 inch plastic sheet, with a U-shaped cut-out to accommodate the boiler. The actual cab floor was another piece of sheet plastic, again cut U-shaped at the front for the boiler. This meant, of course, that the cab had a flat floor on the level of the upper side of the well in the passenger compartment.

THE CAB AND BOILER

The cab sides (which were drawn in two sketches, B and C last month) were then cemented in place to the upper cab floor. The boiler and ashpan were made as a separate unit. The boiler was rolled from 0.01 sheet, using a piece of rod as a former. The top was 0.03 sheet. I found it best to cement the boiler barrel to the sheet and to trim the top circular after the cement had set; this was a much easier method than trying to cut a disc to fit the boiler.

A spare front wheel (98 or 99) was cemented to the bottom of the boiler as a basis for the ashpan: below this wheel the shaped bottom of the pan was glued. The pan front was then cemented in place at a slope of 45 degrees with the triangular fillets behind it. The pan edge was a strip of 0.01 sheet 4mm wide. Liquid cement was very useful in what would otherwise have been a tricky process. The front edges were trimmed to the 45 degree slope after everything had set. Two spare rear tyres (86 and 87) formed boiler bands and also useful supports, being glued to the cab upper and lower floors. The band round the

MIKE BRYANT concludes his a projected Garrett steamer



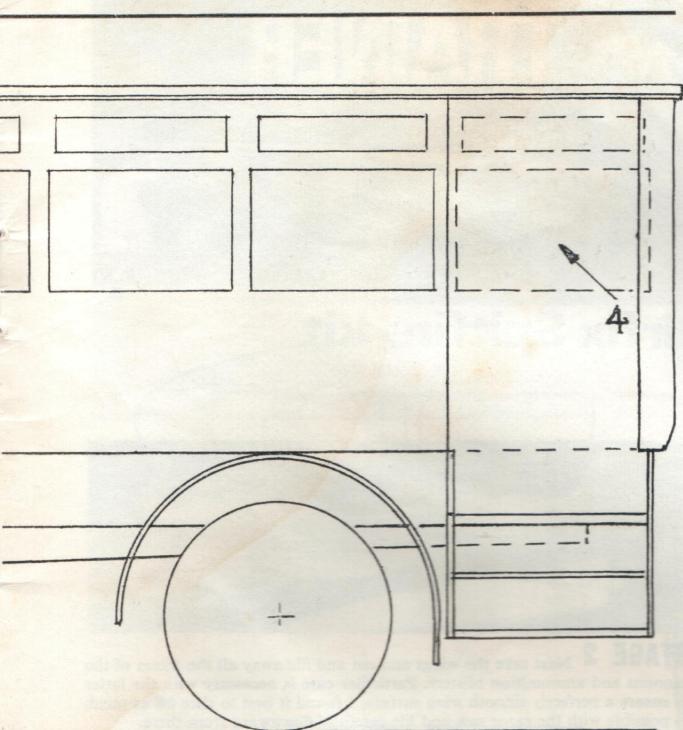
Above: Full-size drawing of the steamer. Key: (1) cab top plate; (2) cab flat floor; (3) cab well underfloor; (4) position of windows on nearside.

Left: Full-size template for ashpan.

top edge of the boiler was a piece of 0.01 strip, 2 mm wide. The chimney was a piece of pencil, thickened by a band of 0.01 strip at the bottom where it joins the boiler. I drilled out the lead at the top of the chimney and glued in a plastic peg which locates in a hole in the roof.

The whistle steam pipe just forward of the chimney was a piece of plastic rod from the kit. Both pipe and chimney are in two parts: one above and one below the roof to avoid having to drill a large hole in the roof for the chimney.

Making the front of the bus was tricky and I am not at all satisfied with the result. If I were doing it again, I think I would use hard balsa for the front panel. Mine was made by wrapping 0.01 sheet round curved formers and using body putty to make the rounded top and sides. The two angled front windows were cut from part 16 of the second kit and the middle flat window was made by cementing top and bottom panels between the two side windows. Once again all the windows in the cab were filled at the



description of how he brought to life from Airfix bus kits

bottom with 4 mm wide plastic strip to match those in the passenger part of the bus. There was also a top plate round the front of the boiler inside the cab, just below the bottom of the windows.

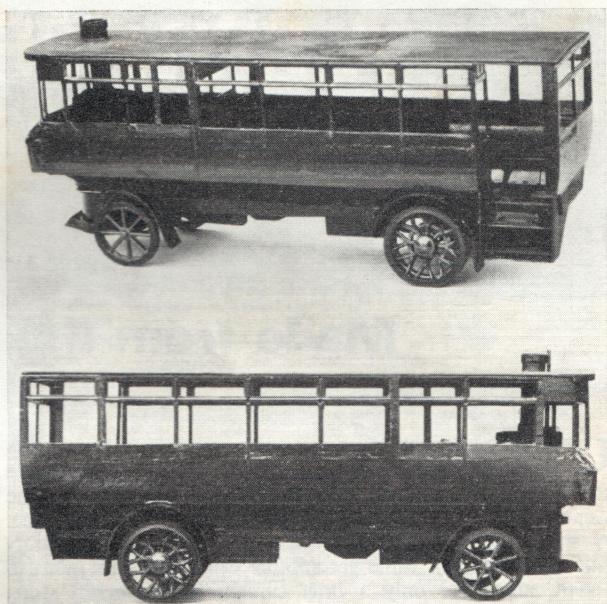
The cab was completed with driver's seat, steering wheel, controls and coal bunker. The positioning of these details was conjectural, as were the seating arrangements in the passenger compartment. The upper picture on page 15 last month shows how I used a combination of lateral and longitudinal seating, using the B Type seats.

UNDERBODY DETAIL AND SUSPENSION

The sloping sides of the floor-well were continued forward under the cab in 0.03 sheet and the front and rear axles, springs and wheels were added according to the Airfix instructions. The lower photo on page 15 last month shows a conglomeration of underframe boxes and pipes culled from the two kits. I do not know the authentic details of a Garrett undertype engine, and what I have done is merely to add some things to lessen a rather bare under-chassis look. I am sure that the final drive should be by chain and pinion, and this I shall add.

The rear passenger steps were built from 0.03 sheet with one intermediate step between the lowest step and the level of the bottom of the floor-well. The passenger entrance was finished off with a pillar of 0.03 sheet 3 mm wide, shaped to fit the tumblehome of the back of the bus.

Front mudguards were Airfix, rear ones a combination of Airfix front and rear guards. They were bracketed to the chassis with parts 117 and 118.



Top: Nearside of steam bus ready for final sanding prior to painting. **Above:** Offside view. Side ready for final filling with body putty. (Photos by D. T. Hardy.)

THE ROOF

This was, of course, a combination of the two kit roofs. The front part was one complete roof minus only the offset rear extension. The second roof also had its rear apron cut off and a section 70 mm long from the back of the roof was cemented to the first roof. All the duckboard ribbing was filed off and the recessed grooves filled with body putty. I found the resultant roof fitted well if the lip under the driver's verandah was trimmed back slightly on each side. The chimney and whistle extensions above roof level were cemented in place. The chimney top was 0.01 sheet rolled round a former with an additional layer at the top to form a capuchon.

There remained the problem of providing a door giving access to the driving compartment. This was located on the *near* side and was formed by dividing the window directly ahead of the passenger compartment into two with 3 mm wide strips of 0.03 sheet. This extra pillar was then scribed heavily down the middle to represent the forward edge of the door. A second scribed line down the joint between passenger and driving compartments completed the door and disguised the joint in the side at this point.

PAINTING AND LINING

Unfortunately my model had to be photographed before it was painted and lined; the pictures this month show it undercoated and without glazing. The final colour scheme will be dark green external bodywork with black chassis, engine, boiler and underframe detail. The roof is at present in black undercoat but will be light grey in its finished state. The passenger interior is light brown with dark brown seats. The driving compartment is also light brown, except, of course, for the boiler, chimney and coal bunker. I suspect that the whistle pipe would be polished brass. The wheel spokes are green, the tyres black. The lining will be gold and the glazing will be added when all the painting is complete.

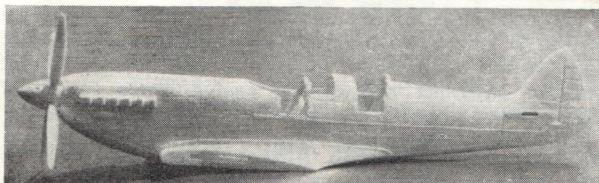
A SPITFIRE TRAINER

Made from the Airfix Spitfire kit

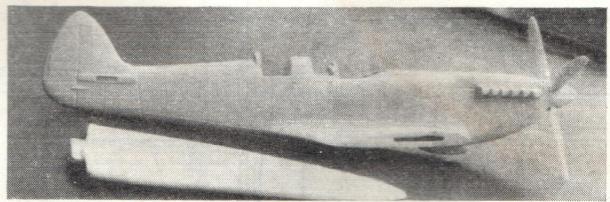
ONE of the easiest of aircraft kit conversions, attractive to beginners and advanced modellers alike, must surely be the trainer version of the Spitfire which served with the Irish Aer Chor (Air Corps) in small numbers until a few years ago. A similar 'civilian' machine was the well-known G-AIDN (illustrated above), while yet another Spitfire Trainer went to Egypt, albeit for only a brief career. These aircraft were, variously, real life conversions from standard Mk 8s and 9s, though such tiny variations as existed do not really worry the modeller.

Back in June and December, 1961, the possibilities of just such a conversion from the Airfix Spitfire IX kit were already exciting readers' interest in Letters to the Editor, and anyone with these old issues of AIRFIX magazine (now out of print) will find much useful information therein. However, a new generation of AIRFIX magazine readers has grown up since 1961, and many others will have missed these early issues, so I feel justified in covering the ground again and introducing a useful dodge for anybody who cannot, or who doesn't want to, mould the rear canopy.

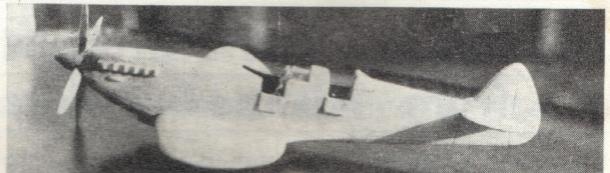
Briefly, I have taken the logical step of modelling the aircraft on the ground with both cockpits open. This way it doesn't matter too much if the rear canopy is not an exact fit and, in practice, I found that the back end of an Airfix Mustang canopy is just right for the purpose, provided that the edges are trimmed to shape. You'll need to buy a Mustang kit especially, of course, but the remainder can be used for the conversion described by Alan Hall on page 54. *Continued on page 51*



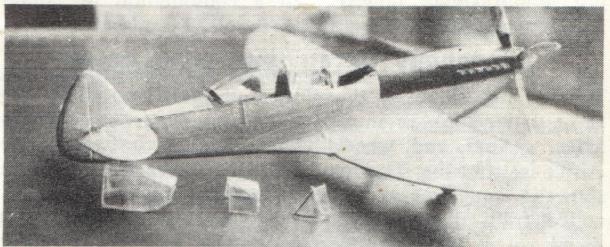
STAGE 1 Assemble the fuselage, front seat, spinner and propeller according to the Airfix instructions and set aside to dry. Then, taking measurements from the scale plan, pencil in the second cockpit position and cut away the plastic with a fine razor saw, such as the X-acto type. You can cut through the lower cockpit edge by drilling a row of holes above the cut line and joining them with a knife. Then file the edge smooth and insert the seat. Spitfires on the ground were often left with their cockpit access flaps lowered and this can be an interesting feature. The front flap is engraved on the model, while the rear flap corresponds to the port radio access hatch on the standard Mk IX, so this is a useful cutting guide. All trace of the radio hatch to starboard should be removed by sanding. The tail fin and rudder must be cut and sanded to give a pointed tip. The chord of the 'pointed tail' was slightly wider than the normal tail, so you must build up the leading edge to give this effect. I simply smeared plastic putty on the front of the fin, left it to set, and sanded to the new profile. Use the scale plan as a guide.



STAGE 2 Next take the wings and cut and file away all the traces of the cannons and ammunition blisters. Particular care is necessary with the latter to ensure a perfectly smooth wing surface. I found it best to slice off as much as possible with the razor saw and file carefully downward from there.



STAGE 3 Because of the unavoidably thick sides, new access flaps—slightly curved—should be made from card curved to shape and cemented in place. A frame beading round the sides of the flap (ie, the inner edges in the closed position) can be cut from stiff paper strip 1 mm wide. Assemble the model and then enlarge the central air intake to filter size by building it forward and slightly wider with plastic body putty. When quite set, file to shape. Take measurements from the drawing and study the shape in the heading picture. Also build up the rear head-rest fairing with plastic putty.



STAGE 4 Add the undercarriage, fill in the aerial locating hole, and fit a pitot tube under the port wing as shown in the pictures and drawing. I used wire for this. Detail the cockpits with control columns (from pins) and seat straps (from brown paper strips). Then paint cockpits and give the model an overall undercoat of matt white or grey. When dry, paint the model silver (Humbrol Railway Silver is recommended). The black cowling is most accurately painted by masking off the exact area of black with Sellotape strips; when removed, perfectly straight edges will result. A windscreens for the rear cockpit is made up face by face from Polyglaze, cemented with UHU and framed with strips of 'chrome' Sellotape. Note that the rear section of the front canopy has already been cemented in place recessed between the fuselage sides by pinching in the bottom edges. This section of the canopy is masked and painted as shown in the drawing. Front windscreens should be cut from the canopy as shown.

**SPITFIRE Tr 9, 158,
of Irish Aer Chor.**

1:72 SCALE

Drawing by A. M. Alderson

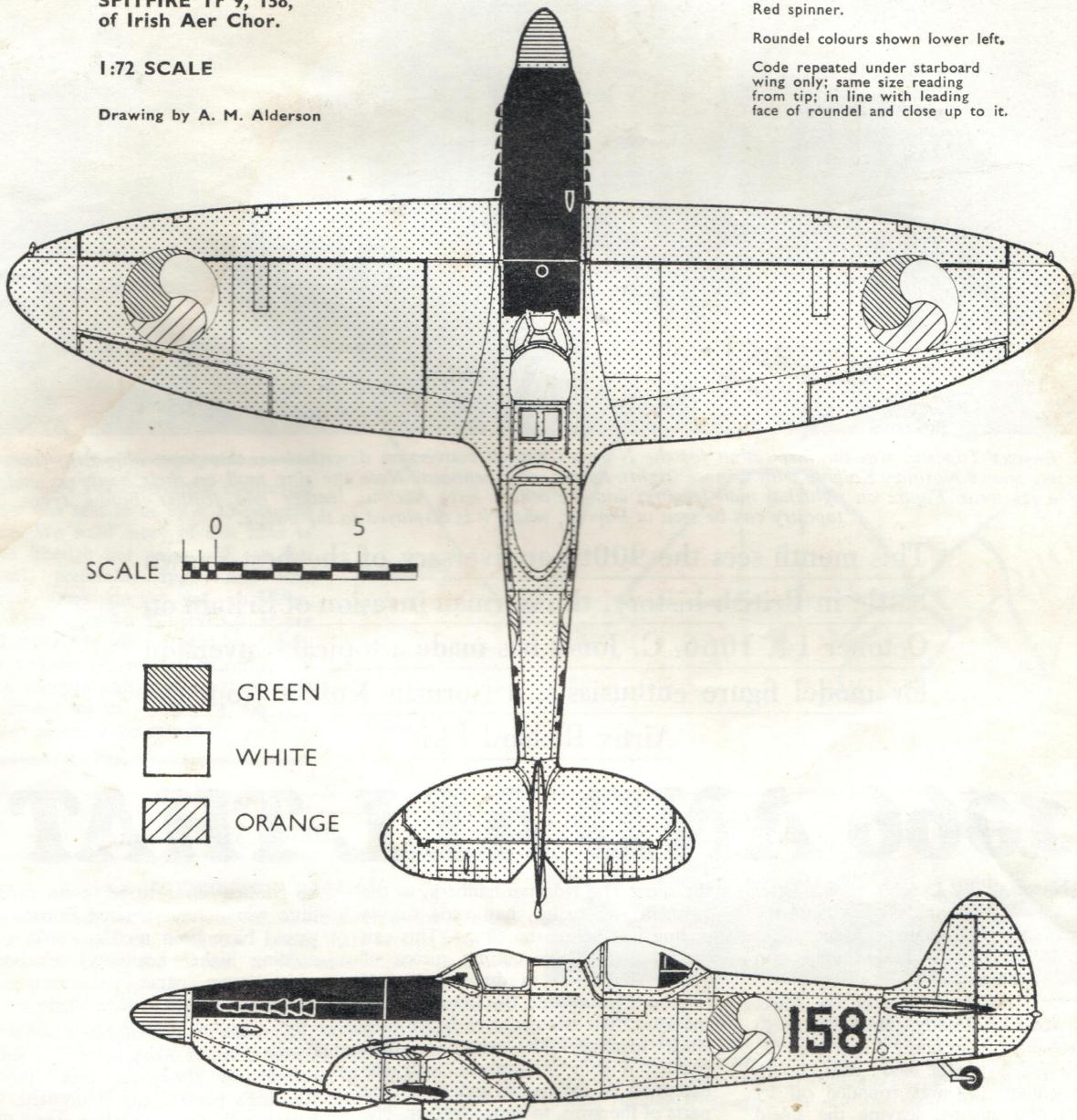
Colour scheme:—

Silver overall with black cowling,
cockpit interiors and codes.

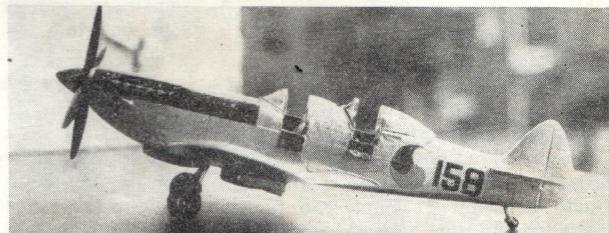
Red spinner.

Roundel colours shown lower left.

Code repeated under starboard
wing only; same size reading
from tip; in line with leading
face of roundel and close up to it.



STAGE 5 The remaining canopy sections are glued in place; I used just a slight smear of UHU carefully applied to the lower edges. This does not cloud the transparency. Strips of 'chrome' Sellotape cut with a sharp knife against a metal ruler are used for the framing. The various widths can be seen from the drawing. Last of all make the Irish transfers as already described, and add the codes. Yeoman $\frac{1}{8}$ inch black numerals are very close to the correct style, though the serif must be cut from the '1' and the corners of the '8' can be rounded with black ink and a mapping pen. Yeoman transfers seem difficult to find these days, but they can sometimes be obtained from model shops specialising in flying model aircraft. Metal band round the spinner is also represented by a 'chrome' Sellotape strip.





The Bayeux Tapestry was the inspiration for the Norman Knight conversion described on this page. This strip from the tapestry shows Norman Knights with a mace (right), lances, and pennons. Note the ring mail on their hauberks and the varied leg wear. Figure on right has mail leggings and the others have various leather and leather-bound types. The tapestry can be seen at Bayeux, where it is displayed to the public.

This month sees the 900th anniversary of the best-known battle in British history, the Norman invasion of Britain on October 14, 1066. C. Jones has made a topical conversion for model figure enthusiasts, a Norman Knight from the Airfix Richard I kit.

1066 AND ALL THAT

ON seeing R. Lynch's recent letter asking for a model of William the Conqueror, I thought readers might like to know how I made my own Norman knight.

I built my model out of the Airfix Richard I kit. Firstly, the shield has to be modified. I cut about 3 mm from the two sides, giving the base a sharp point. The square top was rounded off by filing and cutting, leaving the shield long and narrow, as in drawing 1.

Chain-mail—as worn by Richard I—had not been introduced into Europe on a large scale in 1066. Instead, the Normans wore coats of leather covered by flat rings of iron. To represent this, the long surcoat (parts below the waist) is assembled according to the Airfix instructions, then shortened (I used an X-acto saw) by 22 mm. The body section should now be cemented on to

the skirt. The Norman hauberk, as the garment was called, had wide sleeves ending just below the elbow. This can be represented by cutting pieces of paper, shaped as in drawing 2, and folding them around the lower part of the arms. The triangular ends are then stuck together. The whole is then painted a dull mid-brown, with the exception of the hands and remaining parts of the arms, to depict leather. The mittens are painted brown and the remainder another 'solid' colour to represent cloth.

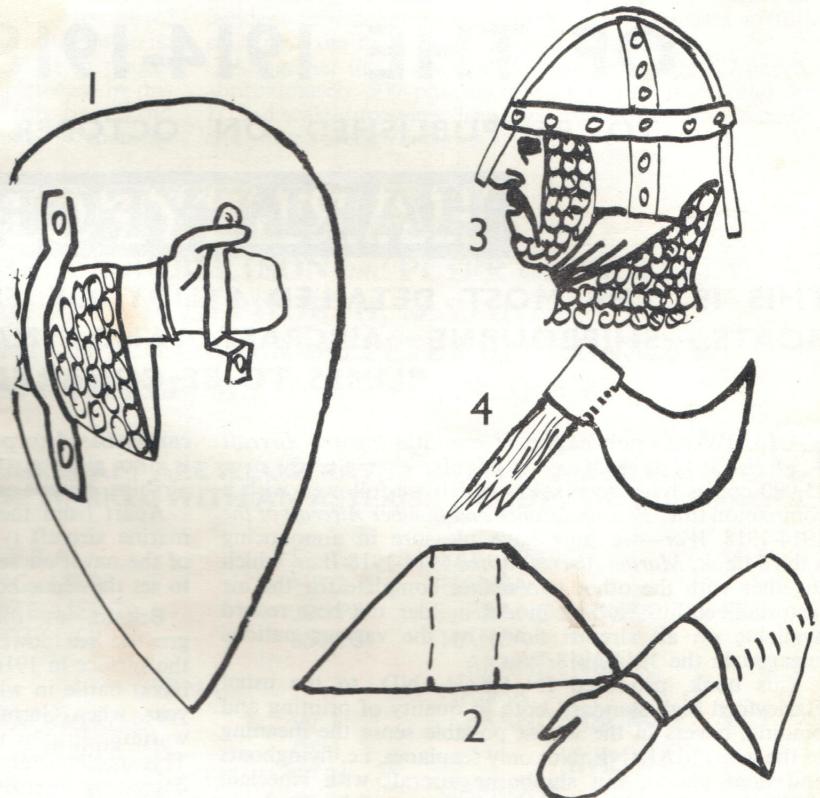
Now comes the most tedious yet easiest part. Paint a large piece of card silver and cut or punch it into the smallest discs you can. Then cement these in rows until you have covered all the coat and sleeves. It takes hours but achieves the correct ring-mail effect.

Now the legs are assembled, and can

be painted silver to represent mail (a little would have entered Europe and would have been used to make parts needing higher flexibility), or bound with brown paper to simulate the more widely-used leather leggings.

To make the conical Norman helmet, I used Joan of Arc's helmet, sawing it round just above the face opening. Richard's padded cap is omitted. The helmet was fitted on after much filing and altering. The Norman helmet was of toughened leather or iron, reinforced with strips of steel. This is represented by 4 mm strips of silver card stuck on as in sketch 3. The head assembly is cemented on to the shoulders, and the sword is used as supplied, but I cut 40 mm off the axe-shaft and modified the axe-head to form the type of weapon that would have been used from horse-back, as in drawing 4.

Drawings show:
 (1) the shield shape and method of carrying, (2) the wide sleeves, made from paper and folded as shown, (3) the modified Joan of Arc helmet, and (4) shape of war axe.



This short but interesting conversion feature was sent to us by a 13-year-old reader. We want more of this kind of article (though not necessarily on this subject), preferably typed and with separate (and simple) ink drawings, and/or photographs. We will pay at our usual rates for all material published. Only original articles can be considered and a stamped-addressed envelope must be included for the return of any unsuitable manuscripts submitted.

A SPITFIRE TRAINER

Continued from page 48

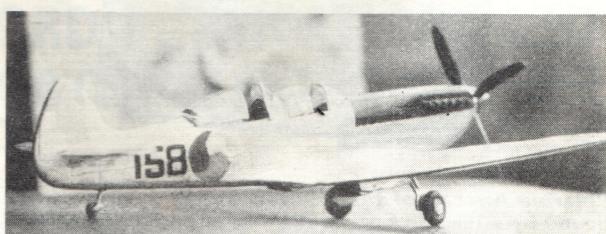
All remaining constructional details are given in the step-by-step picture sequence. So far as I know, there are no Irish Air Corps transfers on the market, so you must make your own. This is quite easy; just draw discs of the required radii on sheet transfer (such as the ABT type reviewed this month in our New Kits and Models section), and sketch in the curved segments, taking them through the disc centres. There is latitude for error and any slight geometrical mistakes won't be obvious unless viewed really closely. If your transfer sheet is white or green, you'll only have to paint in two other colours. Incidentally, my markings were made from a water slide publicity transfer given out once by an oil company. This is the sort of thing to look out for in shops or exhibitions, as any such acquisitions may be of inestimable value sometime in the not-too-distant future.

I found it worthwhile, with the canopies opened, to use a suitably trimmed seat from a second Spitfire kit for the rear cockpit. This will be satisfactory if you make up the second Spitfire as a single-seater with closed canopy. A passable seat for this can be made from plastic card.

Chris Ellis



Above: Spitfire Tr 8, G-AIDN, was painted pale sky blue overall with white registrations. Note that racing number 99 was painted white on a black disc on the tail fin. Heading picture of G-AIDN shows registration under port wing and racing number under starboard wing. Same size registration is painted on top starboard wing reading from aft. Note also the centre-line air filter.



Above: Another view of the completed model. Overscale thickness of canopies is only apparent from the front.

MARINE AIRCRAFT OF THE 1914-1918 WAR

TO BE PUBLISHED ON OCTOBER 8th, 1966 BY

HARLEYFORD

THIS IS THE MOST DETAILED STUDY OF FLOAT PLANES, FLYING BOATS, SHIPBOURNE AIRCRAFT AND NAVAL AIRSHIPS AND BLIMPS TO BE COMPILED

FOLLOWING publication of our title *Fighter Aircraft of the 1914-1918 War*, so popular that already over 15,000 copies have been sold—which we followed with a companion title, *Reconnaissance and Bomber Aircraft of the 1914-1918 War*—we now have pleasure in announcing a third book, *Marine Aircraft of the 1914-1918 War*, which together with the other two makes complete for the air historian, enthusiast and model builder the best record available on all aircraft flown by the various nations engaged in the 1914-1918 War.

This book, produced IN ENGLAND, to the usual Harleyford high standard both in quality of printing and binding, covers in the widest possible sense the meaning of the word MARINE. Not only seaplanes, i.e. flyingboats and float planes, but shipborne aircraft with wheeled, skids or jettisonable undercarriages, and the land- or

carrier-based torpedo-carriers, are all included. Attention is also given to the German Naval Zeppelins and the airships, blimps and balloons of the Allies.

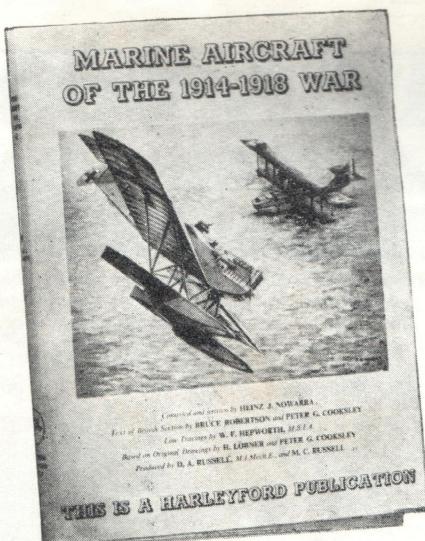
Apart from the individual histories of all the various marine aircraft types, the development and organisation of the naval air service of each of the nations is reviewed to set the scene both in aeronautical and naval history.

Britain, at the time—1914-1918—was the world's greatest sea power whose supremacy was challenged on the surface in 1916 at the Battle of Jutland, the first great naval battle in which a seaplane was involved. The next year, when Germany proclaimed unrestricted submarine warfare, Britain was within a few weeks of starvation. This underwater menace was combated in no small degree by intensive patrolling of coastal waters by seaplanes and in particular by flyingboats through Anglo-American co-operation. Germany, at first using seaplanes for naval reconnaissance, built fighter floatplanes to combat Allied flying boats over the North Sea and so by stroke and counter-stroke the air became of importance in naval affairs.

The United States is now the world's greatest sea power and the origins of their great naval air power are vested in the 1914-1918 War when Americans learned at first hand, initially by sending U.S. Navy officers and men to serve with the Allies and then by bringing their own forces into the conflict.

This war saw the origins of the aircraft carrier and the development of the torpedo-bomber among many other innovations of great importance to both aeronautical and naval history. Thus, this is not only a book for all interested in aircraft, but a book that will interest also those 'who go down to the sea in ships' or have an interest in the naval heritage of their respective countries. Many of the early builders of flying boat hulls of both the Allies and the enemy were ship-building firms, and formations and units of marine aircraft were an integral part of each country's Navy.

Many experimental types were developed during the war, some that never rose from the water or crashed on their first flight; types designed to fly from lakes in Russia or in the African continent, or to fly from platforms erected on ships or merely lifted by crane from ship to water. All these diverse types are covered for each nation. These, with the standard service types, illustrated with



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their variants, provide a unique collection of photographs, many of which have never before been published.

Also, much text information never before published has been compiled, written up and edited by experts, all of whom are internationally known as authoritative writers.

This book is a revelation in text as well as in photographs. The acme of perfection and completeness in this work on marine aviation is met by the fifty-six 1/72nd scale drawings of all the major types, many of them so

large as to require two pages to maintain the standard scale so useful to modellers. As with previous titles, artist 'Doug' Carrick was commissioned to paint an incident representing this period, and it appears in full colour on the dust cover and as a frontispiece.

Altogether this book contains approximately 227 pages, approximately 500 photographs, 1 colour plate, and 56 1/72nd scale three-view drawings, each with a wing section and three fuselage sections.

Compiled and Written by HEINZ J. NOWARA

Text of British Section by BRUCE ROBERTSON and PETER G. COOKSLEY

Line Tracings by W. F. HEPWORTH, M.S.I.A.

Based on Original Drawings by H. LÖBNER and PETER G. COOKSLEY

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'MALCOLM-HOOD' MUSTANG III

Alan W. Hall shows how to convert the standard Airfix kit of the Mustang into the RAF's Mustang III

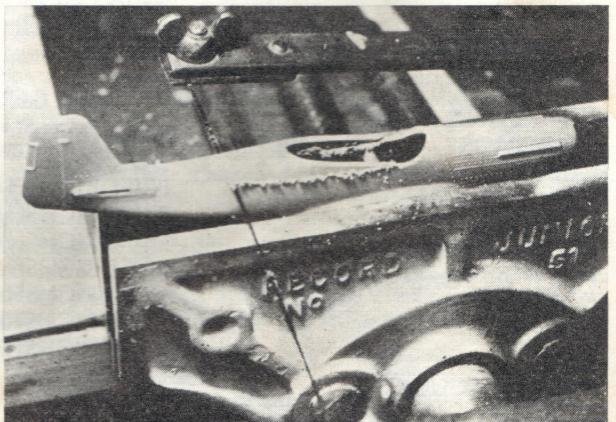
ALTHOUGH there are two kits of the Mustang available in 1:72 scale, both are of the tear-drop canopy type, and it is therefore not surprising that many AIRFIX magazine readers have requested that details be given of how to convert this model into the earlier, but no less prolific, P-51B Mustang I, IA and II.

In this article I have gone one stage further and produced a Mustang III which served firstly in No 19 Squadron at Ford in February, 1944, and later with other squadrons of Nos 11 and 13 Groups of Fighter Command, including Nos 309, 126 and 315 Squadrons. They also did good service in the Italian campaign. More than 900 Mustang IIIs were in RAF service, while less than 900 Mk IVs (P-51D) were used.

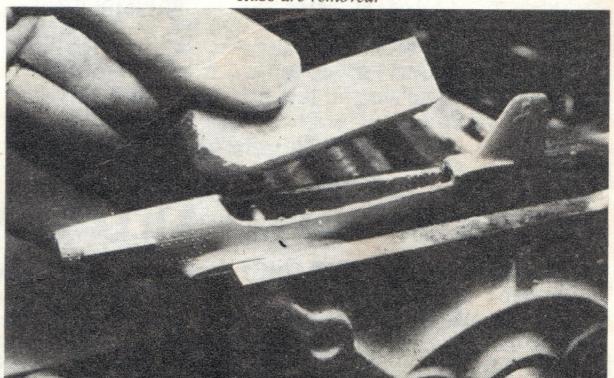
There are few differences between the Mustang marks up to the III, and these are confined to the canopy and engine. By following the instructions given it is reasonably simple to build a Mustang I, and a comparison of silhouettes will give the essential differences between the two aircraft. It should be remembered that the Mustang I had a three- instead of four-bladed propeller, that the small chin radiator of the later marks was not present, and that a long radiator was mounted above the engine, starting close to the propeller. The canopy top was flat compared to the Mk III, and this can easily be done when carving this area of the fuselage.

Reference to and photographs of Mustangs in RAF service can be found in Owen Thetford's *Aircraft of the Royal Air Force since 1918*, published by Putnam. Silhouettes to 1:72 scale can be found in *Aircraft of the Fighting Powers* and most books dealing with the World War 2 period have at least one photograph of the type. I found photographs of the P-51B and C in USAAF markings more difficult to track down, but there is quite a good one in the Harborough publication *United States Army and Air Force Fighters 1916-1961*, from which I made another model, seen on the third page of this article.

Basically there should be little difficulty in producing this conversion for the modeller with average skill. It involves the removal of part of the original kit fuselage, moulding a canopy, rebuilding the cut-away section and making other minor modifications.



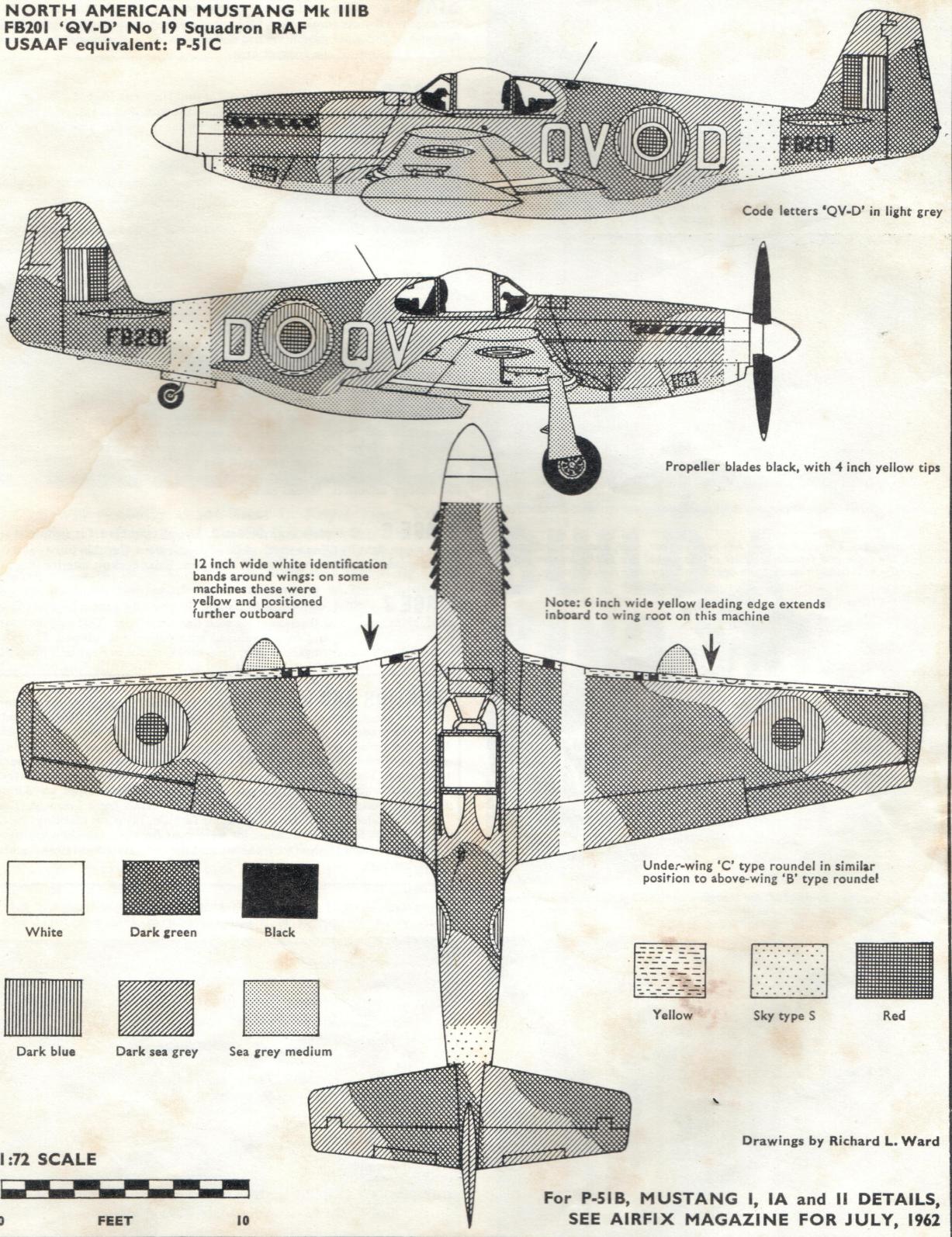
Above and below: The fuselage is cut away to take a piece of balsa, with which the rear fuselage is rebuilt. It is much better to do this in the vice, as a firmer grip can be obtained. Saw cuts must be kept as straight as possible but will have to be cleaned up afterwards with a coarse file. Wing halves are also stuck together at this stage and cleaned up while other parts are drying out. The wing gun stubs are removed.



CONTINUED ON PAGE 56

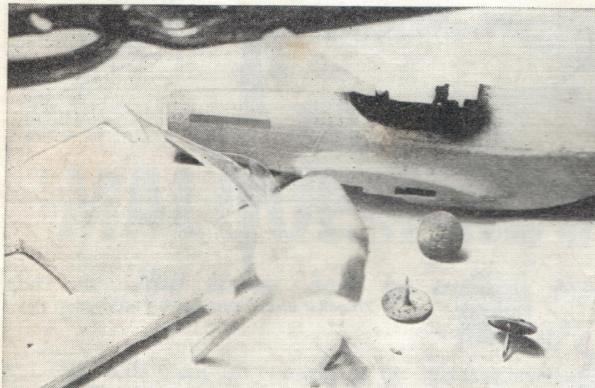
AIRFIX magazine

NORTH AMERICAN MUSTANG Mk IIIB
FB201 'QV-D' No 19 Squadron RAF
USAAF equivalent: P-51C





This shows the wooden section of the fuselage shaped to the correct profile and covered with a mixture of talcum powder and dope ready for polishing.



Canopy moulding. The cockpit area has been cut out, seat, headrest and gunsight installed, the male and female sections of the mould are in the foreground with the new canopy made from acetate sheet ready for trimming.



Painting having been completed, the transfers are applied. Here the wing leading edge yellow strips are being put in place. They were cut from the new ABT transfers. The near-completed P-51B is in the background.



STAGE 1 Glue fuselage halves together and wing halves, leaving both overnight to dry out thoroughly. Make vertical saw cut $\frac{1}{4}$ in deep immediately forward of tailplane mounting and follow this by a horizontal cut starting from the bottom of the cockpit area.

STAGE 2 File cut-away section flat and then cut from a piece of $\frac{1}{2}$ in balsa plank a section which adequately fills the area and is sufficient to cover the new fuselage shape. Ensure a good fit by use of the file, glue into position and leave overnight.

STAGE 3 Shape wooden plug into correct fuselage profile, using a sharp knife and starting with the plan view first. Follow this by shaping the side view. For the cockpit blister leave the appropriate area roughly carved and finish with sandpaper. Fill the whole area of wood with a mixture of talcum powder and clear dope and leave to dry.

STAGE 4 Polish the surface with a very fine sandpaper and follow this with another coat, but include more dope in the mixture. Sand until joint lines are invisible and a smooth painting surface is obtained. While waiting for the second coat of filler to dry, clean up wing and tail unit surfaces, including the removal of the gun stubs on the wing leading edge. Glue wing drop tank halves if required. Cut out nose radiator—this is not done on the model and to do this small modification improves the standard.

STAGE 5 Mark off cockpit area on model and cut out. Use this piece as the male mould and mount on a small piece of dowel rod to ease the problem of moulding when the time comes. Clean up remaining cockpit area and cut out position for seat. Remember that the base of the cockpit on the Mk III is higher than on the P-51D. Leave sufficient wood on each side of the seat area for canopy adhesion. Mould canopy.

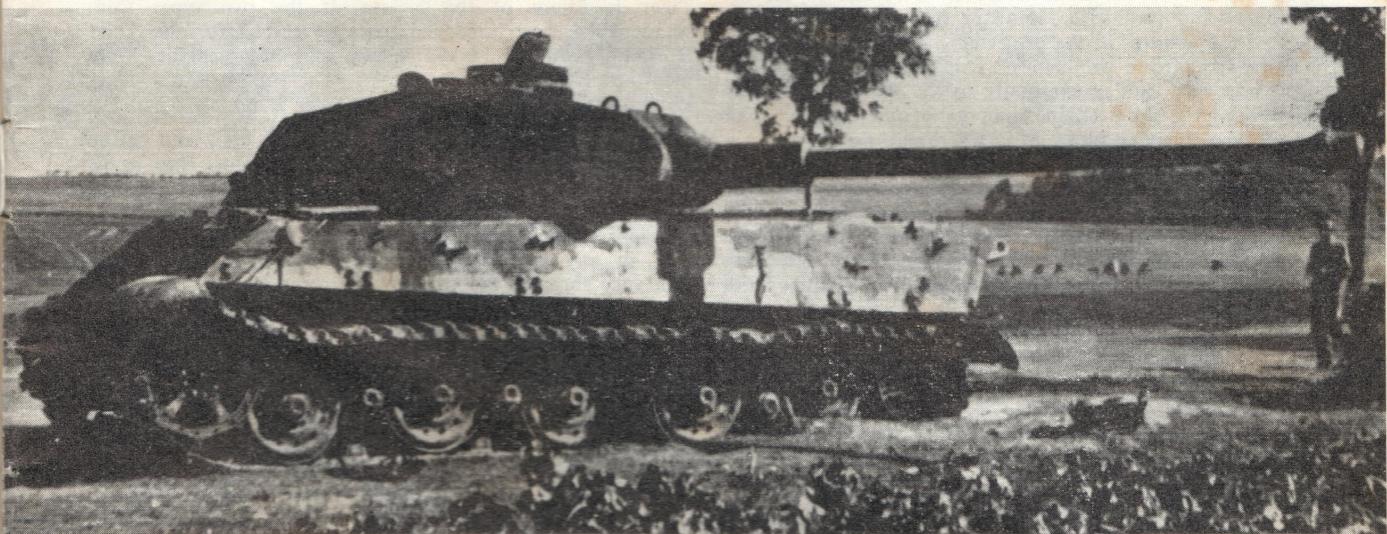
STAGE 6 Complete cockpit detail. Use plastic card for headrest and make a gun sight by filing a spare piece of plastic stem. Cut thin pieces of scrap plastic square in shape to go behind head rest. Paint cockpit interior black.

STAGE 7 Stick canopy in place and fill any tiny gaps with body filler. Polish sides smooth to fuselage sides with fine sandpaper. This may be found to be a difficult job, and care combined with patience is advised. Complete the model by adding wings, tail unit, drop tanks, undercarriage and propeller.

PAINTING AND MARKINGS It is advisable to paint the lighter coloured areas, such as the white nose, wing stripes and rear fuselage band first before adding the camouflage. Those areas can be masked off with Sellotape before painting the camouflage pattern. Yellow wing leading edges were made from the new ABT transfers, which are reviewed elsewhere this month. The sea grey medium undersurfaces were painted with a mixed black and white to get the correct tone. Transfers came from an Airfix Typhoon, codes from Yeoman transfers and serials from Letraset. The USAAF model was painted in a similar fashion, invasion markings first, and the stars from the Mustang kit were used for the national markings. Codes came from HisAirDec transfers and the tail painted serial was made from Letraset.

Left: Mustang III, FB201, completed. Below: The highly polished P-51B, 5M-H, which saw service in Northern France in 1944 with the USAAF.





KOWN variously as the Tiger II, Royal Tiger, Koenig Tiger or King Tiger, the Sd Kfz has been the subject of many 'request' letters to the Editor for a special conversion article in this series. In addition, the King Tiger seems to have confused some readers as to its relationship with the standard Tiger, as modelled by Airfix, so I shall take this opportunity of giving details of its development and history. From the modeller's point of view, the King Tiger is not difficult provided that it is taken in easy stages, and you can make one very impressive King Tiger by combining parts from the Airfix Panther and Tiger, plus a little wood and a few spare parts.

HISTORY IN BRIEF

In 1941 the vast German Armies poured into Russia but, despite the overall success of the campaign, a big shock was in store for the Panzer troops, who found the Russians had two tanks, the T34 and KV1, which absolutely outclassed every German tank and anti-tank gun. Furthermore, it was realised that the T34 was so revolutionary that even the Tiger, which was being developed at the time, could not restore German tank superiority. Immediately, plans were introduced for new models which would incorporate all the latest features. This resulted in the Panther and Tiger II. In September, 1942, the first Tiger Is entered battle near Leningrad and, meanwhile, the unsuccessful Porsche Tiger I was utilised as the chassis of the Ferdinand Heavy assault gun/tank destroyer. Dr Porsche was asked to develop this latter chassis in the light of recent developments. Shortly afterwards, the firm of Henschel were also asked to develop their Tiger to ensure against failure of either design.

Dr Porsche's vehicle, the Type 180, was most promising and production lines were set up, but at this late stage lack of copper for the electric transmission forced its cancellation. Fifty turrets which were already manufactured were delivered to Henschel to be used on their vehicle,

Continued on page 58

BUILD A KING TIGER from Airfix Tiger and Panther kits

Top: Knocked-out Koenig Tiger with Porsche turret traversed.

Below: Koenig Tiger with later Henschel turret. (Courtesy Imperial War Museum.)



BUILD A KING TIGER

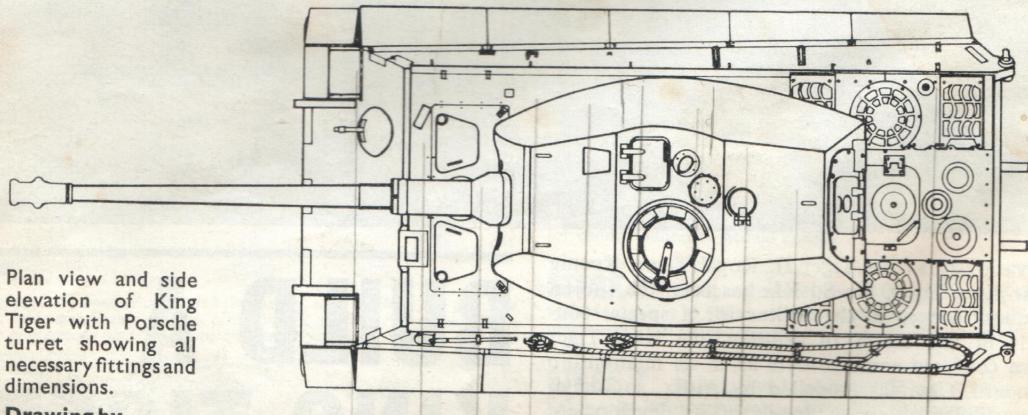
Continued from page 57

which did not appear until October, 1943, due to the insistence of the production ministry that it incorporate as many of the features of the projected Panther II as possible, so as to standardise production. This resulted in a vehicle which was very similar externally to the Panther model G and utilised the same engine and many other fittings. The armour was heavier and, in fact, frontal armour was a massive 6 inch thick slab.

Coupled with this heavy armour, the gun was the super high velocity 8.8 cm KwK43 of 71 calibres length. This gun could penetrate nearly 8 inches of armour at a distance of one mile. Thus it could engage and destroy all opposing Allied or Russian tanks from at least this distance with

relative immunity from return fire. The prototype was demonstrated to Hitler in October, 1943, and by December the first production vehicle had appeared from the line at Kassel, where it was being manufactured alongside the Tiger I. Many of the fittings of the two types were standardised, and improved parts developed for the Tiger II—mainly the steel-tyred wheels and large engine—were incorporated in the later Tiger I. The superb Airfix Tiger kit represents one of these later Tiger I models.

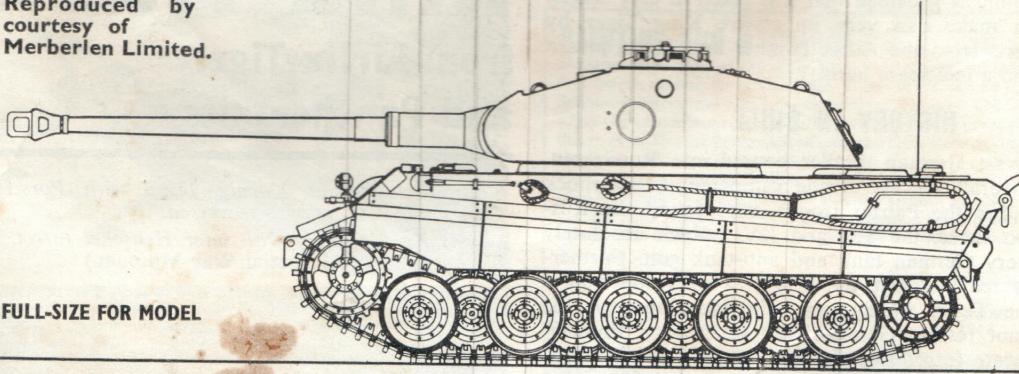
The first vehicle entered service in May, 1943, and before the end of the war had served on all fronts. Due to its huge weight, 68 tons, it was underpowered and suffered from lack of mechanical reliability, but, since it was mainly a defensive tank, this did not affect it as much as it could, and, in any case, the life expectancy of German tanks was very short at the time of its introduction.



Plan view and side elevation of King Tiger with Porsche turret showing all necessary fittings and dimensions.

Drawing by
Hilary Doyle.

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DRAWING FULL-SIZE FOR MODEL

Below, from left to right: Completed sections before assembly. The hull, strip of wheels showing new layout and the new idler sprocket. Turret is shown marked up and roughly carved to shape. The completed model fully detailed and painted. View showing rear of completed model. The model with fabricated turret traversed. Underside showing method of using scrap to prevent tracks from folding in under the wheels.



The more simple Henschel turret was used on all but the first 50 vehicles of the total of 485 King Tigers built before the collapse of Germany. I have chosen the earlier Porsche-turreted version, however, as this is reasonably easy to produce in wood, it is more 'in period' for most modellers and, finally, there is a scale drawing (or, alter-

natively, a large scale dye-line print) available in the Bellona Prints series which gives the correct turret shape and dimensions.

THE MODEL

Now on to the constructional details for the model Royal Tiger. Take the top of the Panther hull and file down the existing turret ring. Then cut across the centre locating hole of the turret axis so that the hull is in two halves, front and rear. Very carefully cut away the front sloping plate and reset this at the new Royal Tiger angle, which is taken from the scale drawing. Cement the rear plate in position on the rear section and leave to dry. Meanwhile, cut a disc 30 mm in diameter from thick plastic card and drill a small hole in the centre. This disc is the new turret ring and the hole will be the axis of the turret.

By placing the two halves of the Panther hull upside down on the plan, an accurate measure can be made of the extension required. From the underside this extension can be cemented in place using bits of scrap. When set, turn right side up and stick the preformed turret ring in place centrally over the gap. Now cut new sloped side pieces for the hull from thin plastic card—these need not be exact as when cemented in place they can be filed to fit correctly. A new hull top should be completed, but the small gap between the turret ring and sides and the gaps between the plastic card sides can now be carefully filled with plastic putty.

Now extend the hull base of the Panther kit with a piece from the Tiger base so that it meets the tail plate. With plastic card, complete the hull vertical sides and the under sides of the overhang—remember these can be trimmed in place if you wish. The axles of the Tiger are at the correct spacing, so I carefully cut away the strip on which the Tiger axles are moulded. File down the idler mounting and attach an extra axle from scrap, making sure that whatever you use fits the Tiger wheels. The wheel layout is shown on the photograph, and it should be noted that, while overlapping, they do not interleave as do those of the Tiger I. An additional four Tiger wheels are required, but if you do not have any spare, leave out four of the inner run of wheels. Cut the collars from eight plain wheels and fit these on the second, fourth, sixth and eighth axles respectively. On top of these place a detailed wheel with collar to front. On the remaining axles, fit a plain wheel with collar towards the inside and, on top, a detailed wheel with collar removed. Repeat this operation on the opposite side.

Take a drive sprocket from the remainder of the vertical Tiger sides and file off the detail on the rear until it fits flush on the sides of your new hull. Make up the Panther drive sprockets and fit a spacer between the sprockets and mountings—I used spare Tiger wheels. Now cement the strips of wheels on to hull side so that drive sprockets slightly overlap the first wheel, but make certain that your model sits correctly and is not listing to one side. I make idler sprockets by cementing a Centurion idler on top of the Panther sprocket. However, a Tiger one would do in

lieu. Mount these on a piece of plastic card so that the outer idler overlaps the rear road wheel. If you have not any spare track to extend the Tiger ones, it will be necessary to fit the mudguards and leave a gap in the track underneath them. Exhausts are made by cutting the vertical pipe from the Tiger fittings and replacing these by thinner pipes similar to those of the Panther—I used two Panther axles cut at the bend.

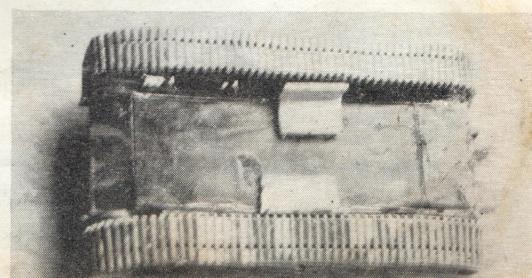
THE TURRET

The turret is the most difficult job, but if it is tackled methodically the task is not so bad. Cut a block of balsa longer and wider than the finished turret. Next mark off carefully the shape of the turret-top on top and base plate on underside and make the cupola bulge. Carve roughly, and make sure that you leave it still oversize, for it is surprising what comes off when sanding, and you may accidentally find it too small. I found it a good idea to smear the finished balsa turret with plastic putty which, when sanded down, gives a very smooth finish. All detail on the turret is cut from the Tiger turret and filed down to fit flush on the roof. Finally, fit a peg in the underside to serve as a pivot.

The gun I made by filing down the Tiger 8.8 cm barrel until I had a single long barrel, but the 7.5 cm of the Panther would just about do. Using another spare 8.8 cm barrel which I found in my bits box I added the final collared section. The mantlet is cut from a spare assault gun mantlet—you must work carefully from the drawing for all this. Now all that is left is to add detail fittings, following the drawing and photographs. There is no hard and fast rule about colour schemes, but from photographs of Royal Tigers in action I chose overall sand with dark green and red-brown random diagonal strips inter-mixed, though no one could fault you if you leave it plain dark grey or plain sand, with or without green mottle. Markings can be left out altogether or applied as on the pictures of my finished model.

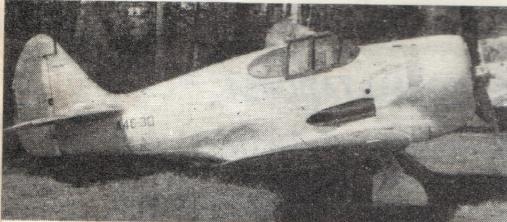
SORRY, NO MATADORS!

Owing to a brief, but unexpected interlude in the hands of the apothecaries, I regret that the Matador conversion article promised for this month will not now appear until a later issue. In the meantime, Hilary Doyle has provided this King Tiger article at very short notice. Readers may like to know that Mr Doyle will be contributing further military articles from time to time in our enlarged size AIRFIX magazine.—C.O.E.

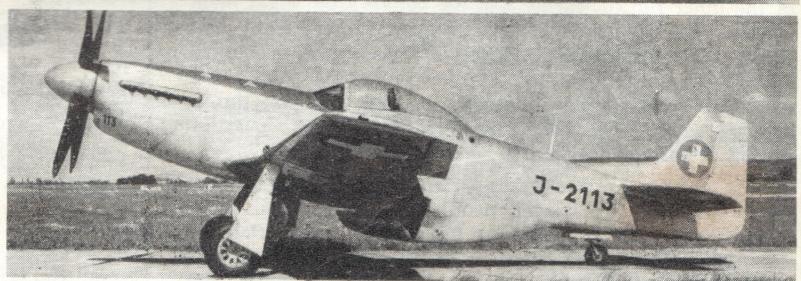




Top: Blenheim IV, BL200, displayed outside the Finnish Air Force base, Jyvaskyla, is the survivor of 12 which flew from Filton in January, 1940, after which a production line was set up at Tempere. Serial letters BL are Finnish code and should not be confused with British serials. **Above:** Me Bf 109E, J-355, displayed at Lucerne's Verkenrhaus, is the sole survivor of 89 bought by the Swiss Air Force in 1939 for internal defence.



Top: Czech MiG-15, serial 1562, on show outside the Prague Technical Museum. Another MiG, 5267, is displayed inside. **Above:** Commonwealth Boomerang A46-30 is now being restored by members of 481 (Maintenance) Sqn, RAAF, for display at the main gate, RAAF Williamstown, NSW, Australia.



Top: Grumman Hellcat II (F6F-5) KE209 is at RNAS Lossiemouth for Navy Day exhibitions along with Fulmar N1854 and others. **Above:** J-2113 is stored for the Swiss Aviation Museum. It is a VS war surplus P-50D Mustang, last of 130 in the Swiss AF.

Below: North American Mitchell III PT (RCAF serial 5244) has been restored as aircraft D of 98 Sqn for the National Aeronautical Collection, Rockliffe, Ontario, Canada.



photo PAGE

'Photopage' is a regular Airfix Magazine feature, and further pictures will be published as available. We would be pleased to consider any contributions from readers, particularly of squadron aircraft or interesting colour schemes, and a free Airfix kit will be awarded for each picture used. Would intending contributors please note, however, that photographs submitted should be private copyright.

Owing to space limitations, it may be necessary to hold pictures for a few months before publication. To ensure safe return, please write your name and address on the back of each print. We cannot use press cuttings.

Captions: M. J. F. BOWYER

The pictures on this page, and the top of page 61 are from a forthcoming book on preserved aircraft, and are presented here by courtesy of its compiler, Mr Leslie Hunt.

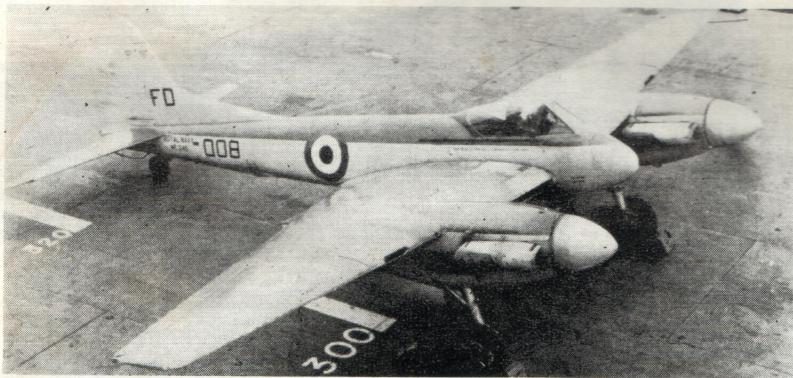


Above: Fokker Dr.I Triplane, F102/17, is in the 'Age of Flight' Museum, Niagara Falls, Canada. It is one of 30 aircraft exhibits with ten more expected to be included.



Top: The only place where you can see a Battle of Britain Spitfire and Hurricane permanently together is the aeronautical gallery of the Science Museum, London. Hurricane I, L1592, is ex-56 Sqn and Spitfire 2A, P9444, is ex-72 Sqn. Both are authentically finished. (Photo: Crown Copyright, Science Museum.)

Above: Westland Dragonfly HR3, WG751, is kept at Fleetlands air yard, Hants, for displays and possible future inclusion in the FAA Museum, Yeovilton.



Above: From Commander D. Hamilton, Royal Navy, we have this fine view of Sea Hornet F20, WE246, 008/FD of 730 Sqn, Ford. It is fitted with special louvred type exhaust stacks for trials. **Above, right:** WD862, a Firefly, in formation with Sea Fury VW583 and a Sea Hawk F1, all of 703 Sqn, Ford, during 1953-54.



Above: VX272, the navalised Hawker P1052, lands during carrier trials. Note the 'batman'. This aircraft was virtually a 'swept' Sea Hawk. This is also Cmdr Hamilton's picture.



Above: A. Wilkinson's picture shows the nose of a Liberator CVIII. XH identifies it as belonging to 220 Sqn, Waterbeach. It was possibly KG989:ZZ-H. Large numbers were converted into transports.



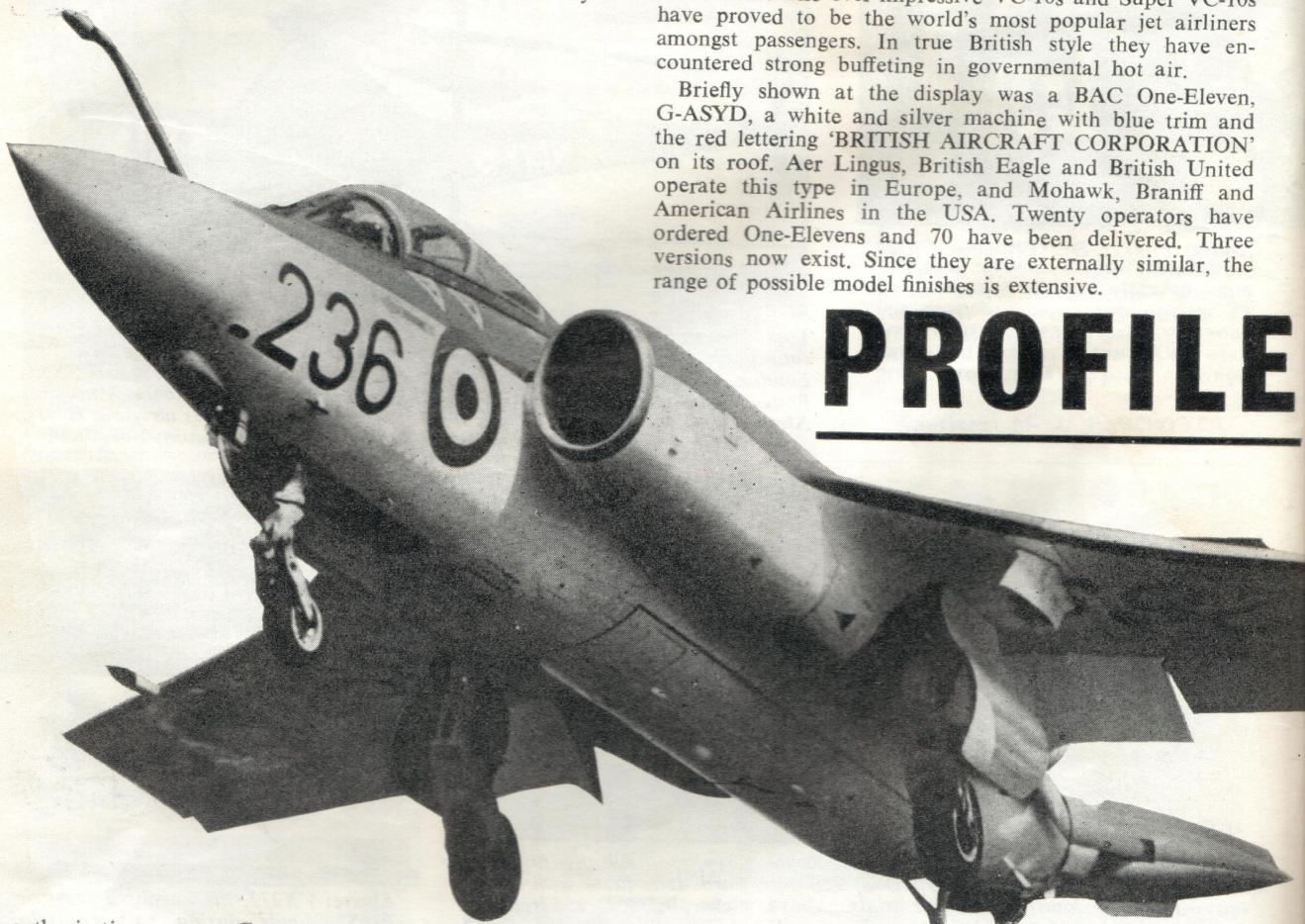
Above: Fox Moth G-ABUP of Sir Alan Cobham's Air Circus will evoke memories in our older readers of those exciting afternoon displays. This picture was taken on August 30, 1932, and submitted by Jonathon Waltho.

ON the opening day of the 1966 SBAC Display all the forecasts were gloomy. Clouds, fog, heavy rain—all were promised. As for the show itself, the pundits were busy, as in recent months, telling of the sad plight of Britain's most advanced industry. Farnborough, 1966, surely must have confounded all. The weather on September 5 was excellent, and the show revealed an industry as

have flown by now. Brize Norton is to be the base for these, and the Belfasts of No 53 Sqn. On the stand of Scottish Aviation was a model of another transport for the Royal Air Force, a Lockheed C-130K wearing light and dark earth camouflage, and having black undersurfaces. Patterning worn was identical to that depicted in our previous issue. The ever-impressive VC-10s and Super VC-10s have proved to be the world's most popular jet airliners amongst passengers. In true British style they have encountered strong buffeting in governmental hot air.

Briefly shown at the display was a BAC One-Eleven, G-ASYD, a white and silver machine with blue trim and the red lettering 'BRITISH AIRCRAFT CORPORATION' on its roof. Aer Lingus, British Eagle and British United operate this type in Europe, and Mohawk, Braniff and American Airlines in the USA. Twenty operators have ordered One-Elevens and 70 have been delivered. Three versions now exist. Since they are externally similar, the range of possible model finishes is extensive.

PROFILE



enthusiastic as ever. Government indecision and massive incompetence are no new things to be tackled by the British manufacturers for, since 1919, Governments have produced a major menace. In desperation, the industry bravely produced unwanted world-beaters like the Lancaster and Mosquito. The days of such achievements may have passed, for the cancellation of TSR-2 was a catastrophic and utterly wrong decision, equalled only by the end of the P1154. Both aircraft would assuredly have proven vastly superior to their competitors.

Fortunately, one advanced project has so far survived destruction. On many Farnborough stands there was evidence of the massive Concorde programme. This, and a new era in flying, will be a stunning feature of the 1968 display.

Remembering, then, that the industry has been viciously robbed of its most advanced military planning, and is much geared to the SST, let us view the 1966 SBAC Show, particularly slanted towards the Airfix production lines.

Dominating the show in glossy grey and white finish, with blue cheat line and black letters, was the second RAF VC-10, XR807, currently undergoing Boscombe Down trials. XR808 is now with No 10 Sqn and XR809 will

Now in widespread service, the Jet Provost T4 again appeared at Farnborough. XR669 was unusual, for it wore a light grey overall finish yet had standard roundels and dayglo. Two years ago a pressurised cabin version appeared in model form and, as the BAC 145, is now being developed for the RAF. The BAC 167 proceeds for the Royal Saudi Arabian Air Force. With an uprated Viper 20F 20 engine, it carries a formidable offensive load.

Since the last SBAC Show, a modified Lightning fighter has appeared and re-equipment of squadrons taken place. At Farnborough, a Lightning F6 with cambered wing leading edge and a larger ventral tank was shown. As an interception fighter the Lightning remains the World's finest. It appears to have a deficiency in fuel load, judging by the enlarged belly tank of the Mk 3 and 6, and the latter's over-wing ferry tanks. Mk 6 XP697 in the static park carried a retractable ventral pack of rockets, and a rocket pod on a pylon beneath each wing tip. A board alongside the aircraft listed loads on show as two Firestreaks, two x 30 mm Aden cannon, 36 SNEB 68 mm rockets in two x 18-tube Matra Type 155 launchers, and 44 x 51 mm rockets in twin retractable launchers. Two 1,000 lb bombs could be carried, also a reconnaissance pack

fitted with five Vinten Type 350 70 mm cameras. Lightning 6s now equip No 5 Sqn and No 56 is rumoured to be getting them. Production is centred on the Mk 6, to which standard many earlier F3s are being worked.

XR770 occasioned much interest, being billed as indicative of the Lightning Mk 53 on order for the Royal Saudi Arabian Air Force. Its finish was standard high-gloss metal, upon which green-white-green roundels appeared. Above the wing roots Arabic and Western lettering appeared in green, the Arabic on a white base. On the fin the lettering again was green and white. Arabian roundels appeared above the port and under the starboard wing tips only.

Westland Aircraft displayed current helicopters. Scout XT-640 was of more than passing interest, for it carried heavy offensive armament. Army Scouts are unarmed, but the possibilities of employing them in new rôles was readily apparent. XT640 had a heavy machine-gun poking from its port rear cabin. Another was mounted in each landing skid support, and a missile pack carrying two Nord AS 11s rested nearby. An alternative load can be a Red Cross pannier. Fitted above the bulged rear door on the starboard side was a hoist, able to lift a 500 lb load to a height of 75 feet; 1,400 lb of freight can be lifted in a net and the Scout can be used to parachute supplies or carry two stretcher pods. Three long-range torso tanks, each carrying up to 214 lb of fuel, can be slung on the aircraft adding 125 nautical miles range at a cruise speed of 100

green-silver finish was the same as carried by RAF Hunters. The entire tail unit and wing tips were red, and a white J appeared on the fin above the black-white-green-red flag of Jordan, which was outlined black. On the rear fuselage was painted the white serial V ♦ A. A red-white arrowhead nose motif, outlined black, had a white centre disc upon which was painted a black wolf-like head. All paintwork was glossy.

Positioned alongside was P1127 XS695, a rather weather-beaten specimen, fitted with a rocket pod on a deep pylon beneath each wing. In the flying display appeared the first 'P1127 (RAF)' or Hawker Harrier, XV276, whose maiden flight took place on August 31, 1966. Already it has made hovering flights, but contented itself with fast passes at Farnborough. Incredible vacillation over the RAF order for 110 continues, as it has for years, and it is hoped that it will enter service in 1968. XV276 is the first of six development aircraft with up-rated versions of the Pegasus greatly improving P1127 performance.

Compared with the model marketed by Airfix, the latest P1127 variant exhibits a number of different features. Its air intakes are much larger, and the inflatable lips have been deleted. At the base of the fin an intake is fitted. The wing trailing edge is back-swept, and the undercarriage—previously placed at the wing tips—is now inset, for the span has been increased and rounded wing tips (shaped like the Hunter's) are fitted. A tailplane with compound leading edge sweep, similar to that of the later version of the Kestrel, is also a feature. XV276 appeared at Farnborough with a large nose probe, and wears standard RAF roundels.

Introduction of foreign aircraft at the 1966 Show brought an opportunity to see some rare shapes in Britain. Two Fiat G91T trainers appeared, this type being a relatively simple version to model and carefully dealt with by Alan Hall in our March, 1966, issue. Both machines at Farnborough were grey-green-silver in colour, with dull orange one-time

Buccaneer S Mk 2 XT 269:236 of 801 Squadron landing on H.M.S. Victorious. It is seen wearing the grey/white finish.

Farnborough 1966

knots. Like other Scouts, XT640 was camouflaged overall in green and brown.

Alongside stood a glossy grey Wasp, XT782, carrying two yellow homing torpedoes. New features were large bulging rectangular fairings placed above each rear door and supported by four struts. Another grey Wasp, NZ-3902:430, dominated the Westland stand in the display tent. This is the second for the Royal New Zealand Navy. Serials and lettering were white.

Conversion of the Airfix Buccaneer to Mk 2 is not as simple as might appear, for enlarged intakes call for tedious work. Mk 2s have now largely succeeded the first version, and grey/white XV157 was statically displayed, surrounded by bombs, rockets, Bullpups, long-range tanks and a special reconnaissance pack. 809 Squadron flew its Mk 2s across Farnborough, revealing them painted extra-dark sea grey overall, with light blue letters and numbers. Their national insignia is of the standard dark blue and red type.

A model of the HS801 maritime Comet was on show, and the prototype is well advanced at Chester. It should be possible to model this aircraft using the Airfix Comet as the basis. Deeper fuselage and an elongated nose are major features portrayed in a released photograph.

Farnborough without a Hunter seems an impossibility. In the static park was a Mk 6 destined for Jordan. Its grey-

dayglo wing tips and tail sections. On the wings the orange tips were bordered by a black chordwise band. Red step lines were painted on the port wing root. G91T/1/NC114 MM6433 had SA-83 in large white characters on its nose, and G91T/NC113 MM6432 was SA-82. Both carried a blue shield device on either side of their fins, outlined in white and bordered black. On it was painted a white eagle outlined orange. Beneath the crest in black on a white scroll was written 'CUOALA ADDESTRAMENT OVIODETTI'. Both G91Ts came from the training school at Amendola.

From Schiphol hailed a Fokker Friendship Mk 400 combiplane, PH-FKA, finished in creamy grey and white, with red, white and creamy grey trim. On her nose 'SORONG' appeared in black. After the show PH-FKA will go to Indonesian Oil Company of Permina. Friendship production lines currently feature combiplanes for Ansett and Aramco, being Nos 215 and 216. Shortly before the SBAC Show AIRFIX Magazine toured the Fokker works, and a forthcoming Profile will deal in detail with the Dutch scene.

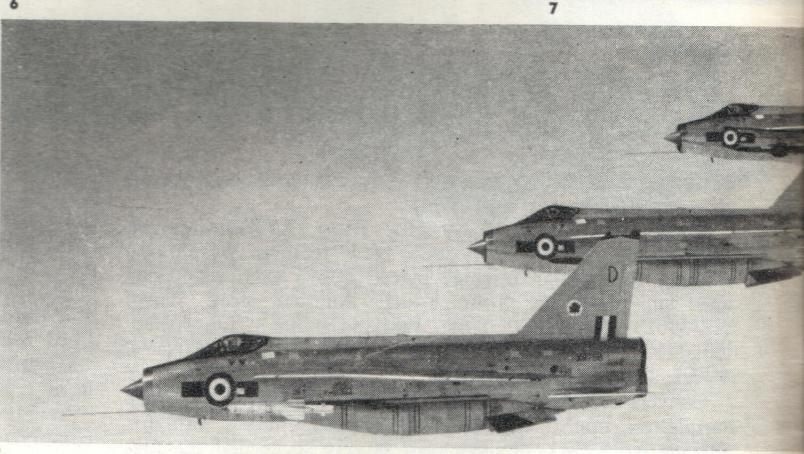
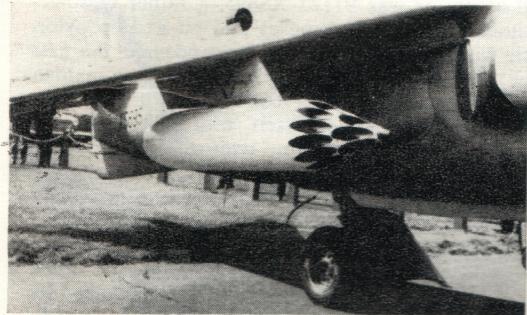
It would be a narrow-minded model builder who ignored the machines so far not available in the Airfix range during any display. One of the most fascinating aircraft I found at Farnborough was the trials Canberra TT18. It is a B2

WJ632 modified to carry beneath each wing a set of Rushton targets and winch gear. From the wind-driven unit streams some 48,000 feet of thin wire, at the end of which is a red dayglo target. Much development work has been undertaken by Flight Refuelling to produce the Rushton gear, earlier trials being made using Meteors streaming 16,000 feet of wire.

The Canberra was silver, with the customary TT yellow

and black undersurface stripes and black serials. 'T bands' were in dayglo red 18 inches wide one foot outboard of the nacelles above the wings, and also round the upper section of the rear fuselage. A belly bulge contained two cameras recording target release. A third camera was situated in the fuselage tail cone.

Another interesting machine was the Andover CI, XS595, wearing glossy light and dark sand camouflage and black



1. A feature of a number of aircraft was a Matra rocket pod, seen here beneath the wing of the P1127.

2. VC-10 XR807 makes a steep getaway showing placing of roundels and serials.

3. A Hunter ground attack fighter for the Royal Jordanian Air Force. 3a. The close-up shows the nose marking, red/white cheques with black head and outlines.

4. Fiat G.91T SA-82 comes in to land. Note also, reconnaissance nose.

5. The Wasp XT782 in the static park. It has special containers above the doors from which inflatable flotation bags can be released. This is likely to be a feature of other naval aircraft.

6. XT782 flying, with the flotation bags now visible.

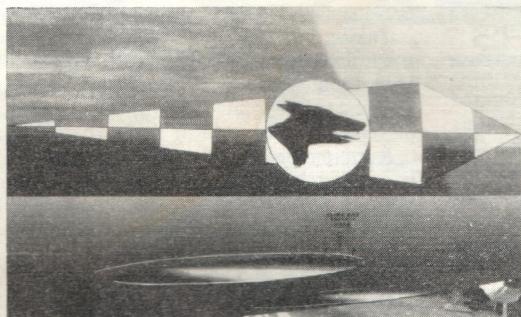


undersurfaces. White serials were oddly situated amidships, and beneath the mainplane under the starboard tip of which had been applied a red and blue roundel. Elsewhere the roundels were red-white-blue. Cockpit roofing was white. Inside the main cabin the roof was painted cream and the sides glossy grey. The rear section was a mid green.

The 1966 SBAC Show was more encouraging than one dared to hope. Orders for the Concorde were announced,

and Handley Page were able to reveal large contracts for the Jetstream. Some P1127s seem assured for the RAF and the future for the VC-10 may be brighter than it seemed to be in recent months. In short, despite the loss of TSR-2 and the advanced VTOL machines, the British aircraft industry is clearly battling hard with its traditional foe, and successfully!

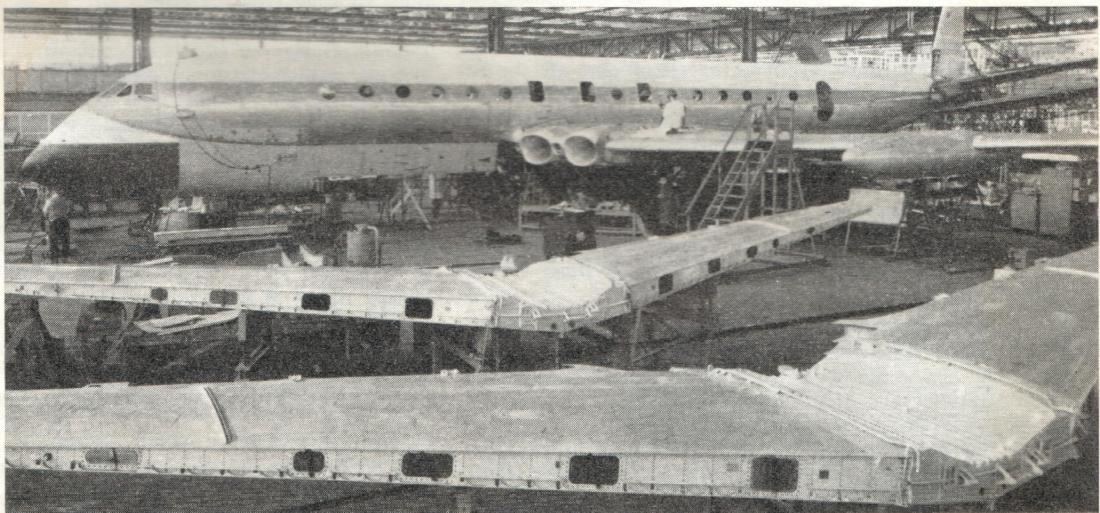
M. J. F. Bowyer



3a



4



10



12

7. NZ-3902 of the RNZN in the large tent. She is destined for service aboard the Waikato.

8. The Scout XT640 with a machine gun poking from the rear of the cabin and another situated on the landing struts.

9. Latest RAF Lightning is the FMk6. Three of No 5 Squadron's aircraft are shown here, D:XR758, G:XR754 and F:XR760. (MoD photograph.)

10. A real-life conversion. The fuselage of a Comet is seen here being converted into the prototype of the HS801 maritime reconnaissance aircraft, due to fly next spring. A fin fillet was incorporated in the model at Farnborough.

11. XV276, the prototype Hawker Harrier, RAF development of the world beater P1127.

12. XR760 banks away, revealing FR probe and modification to her belly tank characterising the Mk 6. Red bars (5 Squadron's colours) flank the nose roundel. A white fin disc carries a green maple leaf motif, dating back to the time 5 Squadron had much to do with the Canadian Corps. (Ministry of Defence photograph.)

NEW BOOKS

REVIEWED FOR MODELLERS

Devon buses

HISTORY OF DEVON GENERAL, jointly compiled by the PSV Circle and the Omnibus Society. Published by Ian Allan Ltd, Terminal House, Shepperton, Middx. Price 10s 6d.

THIS is the first of a very welcome series of bus company histories and gives details of all buses owned by Devon General since the company was founded in 1919. An amazing amount of information is presented chronologically giving details of all new and acquired vehicles year by year. In addition, comprehensive notes on subsequent withdrawals or disposals sometimes go through more than one change of ownership giving added interest to the book. The presentation and layout is excellent and all the 48 illustrations appear at a point relevant to the text—a feature we particularly appreciate in a reference book of this kind. The book has 112 pages of a size uniform with the British Bus Fleet series and is tremendous value.

Thin red line

ALL FOR A SHILLING A DAY, by Donald F. Featherstone. Published by Jarrolds, 178-202 Great Portland Street, London, W1. Price 30s.

MR Featherstone is well-known as a writer on wargames subjects, but his latest book steps up to full-size soldiering and deals with the story of two years in the history of a famous British regiment, the 16th Lancers. To be precise it sees these two years through the eyes of the men of the regiment at the time of the first Sikh War. The book concludes with the battle of Aliwal in January, 1846, and also deals with the regiment's part in the battle and events leading up to it. This gives the author opportunity of taking the reader into the barrack-room, on to the drill-square, in the saddle, and on board a troopship. Day to day life, in fact, is recorded in vivid detail and it takes little more imagination on the part of the reader to find himself marching with the regiment to the clatter of horse hoofs and the jingling of harness—a sound now only heard at Trooping the Colour and changing the guard in London. Wargamers needing 'atmosphere' and ideas for table-top warfare will, therefore, find the book of great value. Detailed notes and appendices, together with plenty of detail in the narrative, provide a mine of information useful for model soldier fans and those interested in the romantic colonial wars of the 19th century.

Giant Profiles

PROFILES 109-114, edited by Martin C. Windrow. Published by Profile Publications, PO Box 26, 1a North Street, Leatherhead, Surrey. Prices 2s each.

IF you've got round to thinking of the Hawker Hurricane as a rather 'old hat' modelling subject, you'll be somewhat surprised at the many interesting possibilities suggested by the latest release in the Profile Publications series, covering the

Hurricane 1. Apart from being just about the best Profile issue so far in terms of coverage, it is also the largest, with a total of 20 pages, four of them in full colour. The inside covers, front and rear, give five-view drawings of Stanford Tuck's machine and a 111 Squadron machine, respectively, while the centre-spread gives no less than 18 other Hurricane 1 colour schemes and modifications, ranging from the prototype to a flamboyant tropical Hurricane captured and flown by the Germans.

Taking into account other machines shown in the text, we think that anyone who set out to model all these subjects would have about six months' work before him! An excellent cut-away drawing, some quite rare pictures, informative text and a list of representative aircraft make this of top value for only 2s.

Running close to the Hurricane, and released concurrently, is another big 20-page Profile, this one covering the Messerschmitt Bf 109G and K, plus licence-built derivatives. Since Airfix produce a kit of the 'Gustav', this publication will be of great interest to modellers, and they are well-catered for with 31 paint-schemes illustrated in colour on four pages. The five-view colour drawing shows a Bf 109G-5 of JG 54, the famous 'Green Hearts', while the remaining 30 schemes are side elevations showing typical German aircraft and variants used by other forces. These include Italian, Croatian, Swiss, Czech, Finnish, Hungarian and Israeli aircraft. Top quality pictures and well-written text round off this other 'must' for modellers.

These two giant Profiles tend to overshadow the other titles released at the same time, but the subjects covered, the Martin Marauder, English Electric Lightning F1, Fiat BR20 bomber and Hanriot HD1, are of equal interest. The Marauder and BR20 Profiles are 16 pagers with centre-spreads in colour, while the other two have 12 pages. With good colour reproductions and numerous pictures, many of them rare, these remaining Profiles make up a bumper month for aviation enthusiasts.

Way out East

THE STEAM LOCOMOTIVES OF EASTERN EUROPE, by A. E. Durrant. Published by David & Charles (Publishers) Ltd, South Devon House, Railway Station, Newton Abbot, Devon, and distributed by Ward Lock & Co Ltd. Price 45s.

MANY enthusiasts viewing with dismay the run down of British steam locomotives are turning further afield. We can be thankful to people like Mr Durrant who started the trend several years ago and are now in our hour of need able to present us with such a vast fund of knowledge. With all the difficulties of language, distance, lack of previously published information and not least the hostility shown by railway authorities to railway photographers in some countries of eastern Europe, the task is no mean one. It has however been very successfully accomplished in this book.

Thirteen chapters survey the locomotive stock of each country separately although because of political and boundary changes it is inevitable that the surveys overlap.

A glance through the 160 pages at the 100 photographs and many line drawings show what tremendous variety of locomotives there are to be seen in this part of the world. Ancient outside frame 0-6-0s and 4-4-0s from Turkey and Hungary, a most odd looking Turkish 2-6-0 with a pair of intermediate carrying wheels in between the coupled wheels, streamlined 4-4-4 tanks in Hungary, huge 2-8-4s and 2-10-2s in Rumania, narrow gauge in Greece and Yugoslavia, massive Bulgarian 4-8-2s, 4-10-0s and 2-12-4 tank locomotives, Jugoslavian 2-6-6-0 Mallets and an 0-12-0 metre gauge tank locomotive, and a Latvian 2-2-2T are just a few of the delights.

NEW KITS AND MODELS

NEW TRANSFER SETS

BOTH ABT and the UK firm of Replica Decal Ltd have new offerings for the model maker this month, and both will be of considerable use.

The French company have produced a number of colour strip transfer packs which will be of great use to supplement the existing Yeoman samples which we have had to put up with for so long. The Yeoman transfers are satisfactory but, unlike the French issue, have to be cut into shape before soaking and application to the model. ABT have been wise in supplying yellow, green, black, blue, white and red strips which are to 1:72 scale, that is they are equal in scale to 1 ft, 1 ft 6 ins, 2 ft, 3 ft, and 4 ft in width. This takes a great deal of the labour out of accurately cutting a strip to the smaller sizes.

The ABT transfers were used by Alan W. Hall on his conversion model this month and illustrations appear on pages 54-56.

Replica Decal have produced two sheets this month. The first is for a Corsair II flown by Lt P. Cole, DSC, when with No 1830 Squadron RN in the Pacific Campaign. The second belongs to an Avenger II of No 857 Squadron RN, also in Pacific camouflage. Both sets are on the same sheet and will do admirably for either of the Airfix models of the Corsair or Avenger.

The other sheet will delight the makers of Luftwaffe models. Again two sets have been included on the same sheet for, firstly, the all-black Messerschmitt Bf 110C of Hauptmann Werner Streib when in command of 1/NJG 1 at Schleswig and, secondly, a set of markings for a Junkers Ju 88A-4 of 4/KG 54 'Totenkopf'.

With each set a detailed description is included of where the markings are to be placed on the model. All of them are matt finish and are of the individual slide type. Replica Decal are fast making a name for themselves with the high standards they maintain.

The ABT transfers cost 3s 6d per pack and the Replica Decals retail for 6s each set. Replica Decals can be obtained by post from their head office at 60 Abbey House, 2 Victoria Street, London W1, and the ABT transfers are obtainable from BMW Models in Wimbledon, who supplied our samples. A.W.H.

ANOTHER TAMIYA TANK

YET another addition to the quite fantastic Tamiya range of motorised AFV kits came to us recently from BMW Models. This is a 1:21 scale twin-motor replica of the German Pz Kw III medium tank, and costs 4 guineas.

This big kit is moulded mainly in dark khaki plastic and includes any number of metal suspension springs, a pair of motor mounting frames, the two 3 volt Mabuchi motors themselves, a couple of easy-to-assemble gear trains, the driving sprockets, bogies and idler wheels and a couple of well-formed black rubber tracks.

The tank itself (pictured right) is accurately modelled and is complete with panel and rivet detail, lockers, gratings, revolving gun turret, elevating gun, opening hatches and working towing shackles, hooks and so on. Remote control

is provided by a battery box—hand-held—containing four control buttons. The system is very easily wired, and when complete the tank can be driven in either forward or reverse, and is fully steerable. You just walk along behind with about five feet of wire connecting the control box to the tank itself and drive it over all kinds of obstacles—feet, books, shallow steps it takes in its stride, and can create havoc in a flower bed, leaving authentic tank tracks behind it!

The instructions in our sample kit were in Japanese script throughout which on first sight we thought might pose quite a problem, but once the job of construction was begun it became obvious that by close reference to the excellent drawings on the instruction sheet, you just couldn't go wrong. Location of some of the parts was a bit tricky, but if you carefully sift through everything in the box, you'll find what you're looking for in the end. Sprue charts are provided, and proved very useful, but some parts are not made on the sprues, and just by looking at the instructional sketches themselves it's easy to get confused.



Nonetheless, this is an excellent model, and one which goes on giving great enjoyment long after completion—it is not a model to let stand and gather dust, and on the other side of the coin, detail is good enough to take it out of the 'toy' category. We reckon it's good value for money, and must be even more so if you live in Tokyo! D.C.N.

JUNGLE WAR

LATEST from Merberlen Ltd in their Battlefield Accessory range is a set of structures that will appeal to those military modellers who wish to extend their table-top warfare into the jungle. Moulded in styrene, it consists of a round Japanese Army bunker, a square bunker, and a pile of bamboo logs, suitable for providing cover for a mortar or machine gun team. The bunkers are of the correct earth pattern piled over bamboo supports, and the entrances and loopholes are reinforced with bamboo logs. All the structures are on a common base and can be cut free with scissors or a craft knife. Since the bunkers are hollow, it is possible to cut out the loopholes and place OO/HO scale figures inside. Price of the set is 3s 6d, postage 9d extra.

C.O.E.

Letters to the Editor

Letters to the Editor can only be answered in the magazine. Readers whose letters are published each receive a free Airfix plastic construction kit of their choice. We are always pleased to receive your comments and pictures, which will be considered for publication. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters columns.

Cat out of the bag

HAVING let one cat out of the bag, according to Mr R. G. Power of Canada, I wonder if I may let loose another?

Last December I bought a well-known American car kit for 39s 6d. I was fairly satisfied with the chassis and engine, but I thought the bodywork and the building instructions left much to be desired. However, I decided to buy two other models made by the same company and again priced in this country at 39s 6d each. Having friends in America, I asked them to obtain these kits and to post to me. They did so; the kits cost only 17s 6d each plus postage—quite a saving. Obviously, in future I shall buy my American kits direct, as it would appear to me that imported US plastic kits are somewhat overpriced.

It is indeed fortunate for us that we have in this country the Airfix company that really does give excellent value for money, and whose products improve with each new kit issued.

Peter H. J. Pittam, Leeds 16, Yorks.

Import duty and distribution costs do bump up prices and it is difficult to dispute the claims of importers. Readers will be aware, however, that the US-designed Airfix 'Elite' series kits DO come at bargain prices.—EDITOR.

Aircraft transfers

I FEEL sure that many complaints regarding the appearance of glossy transfers result from failure to trim the decals properly; when cutting out before soaking off for application to the model they should be trimmed precisely to the outline of the design. Composite decals (eg, roundels with squadron letters printed alongside) should be cut into their component parts, each separately trimmed.

If this is not done, the result is an unsightly margin of varnish extending around the design; even where matt finished transfers are used, or the transfers or the whole model coated with matt varnish, this surround is still visible even if not so prominent. When properly trimmed, and the inside of letters, etc, touched up with the base colour after application, the appearance of the finished model leaves little to be desired.

In this connection, if manufacturers could be persuaded to print their white transfers on a strongly tinted backing paper, it would make accurate trimming very much easier. Yellow too is very difficult to pick out on a white paper.

A much more serious cause for complaint than gloss finish is surely that in the great majority of cases the 'centre spot' of

roundels is printed off centre. Since the manufacturers do not appear to be able to eliminate this fault, it would seem a perfectly simple solution to print each colour separately on the backing sheet; a British roundel for example would consist of a blue disc, a smaller white disc, and a red centre spot, these to be superimposed in turn on the model.

Another very annoying feature of the transfers supplied with many Airfix kits is the printing of squadron letters in white where they should be grey or sky, and of serial numbers in roundel blue instead of black. Whilst I appreciate that the use of additional colours involves extra cost, I do not imagine that the increase of cost to do the job properly would be more than a fraction of a penny per kit.

Whilst on the subject of transfers, I find Yeoman's transfer strip and alphabets invaluable. I am aware of course that it is possible to paint the strip any colour required, and apply it in the normal way after the paint has dried; nevertheless, I should welcome an extension of the present range of colours by the addition of green for both strip and alphabets. About one third of the current national aircraft insignia contain green, and this was, of course, also the colour of lettering used to denote German staff aircraft in 1939-45. Grey and sky alphabets would also be most useful, as would alphabets in 3/16 inch size.

W. C. F. Wheeler, London SE26.

'Off centre' spots—otherwise called 'out of register'—are caused by shrinkage of the backing paper during printing. The colours are printed in turn (ie, red, white and blue require three runs through the presses) and with every large print order, such as Airfix kits need, the production of transfers inevitably takes time. It only requires a fall of rain during the process for the paper to shrink and this could very well occur between printing the various colours. Hence the occasional distortion of markings. Fortunately the transparent bags in which many Airfix kits are supplied allows you to glance at the transfer sheet before purchase! The French firm of ABT has just introduced a range of colour transfer strips and these are now stocked by BMW Models of Wimbledon (see page 67)—EDITOR.

Sherman Crab

I AM a regular reader of the AIRFIX magazine, especially the Military Modelling articles, and enjoy them very much. I have recently made a Sherman Crab minesweeper from a back issue.

While making the Crab, I discovered an excellent method for fixing the chains as though the Crab was actually sweeping. This method requires patience, but is not

too difficult to accomplish a satisfactory result.

It necessitates threading each length of chain with 10 amp fuse wire, in and out of the links about four times on each chain. The wire should then be cut off about 1½ mm from one end and secured at the other end by wrapping the wire around the last link of the chain. The chain then becomes more rigid when glue is used to reinforce it, and it can be bent slightly before fixing on to the revolving drum.

Small holes, about 1½ mm deep, should be drilled into the drum in staggered rows, the number of holes depending on the number of chains to be used. The stubs of wire on the lengths are then cemented into the holes, using a good cement, and I found it best to do only one row at a time, thus ensuring that they set in the correct position.

S. Blockley, Wakefield, Yorks.

Matt problem

AS many people seem to have trouble with gloss decals and paints I have found a way to combat this. If a thin equal amount of 'Dura-Glit' is spread evenly over the surface (this can be done as the solution is soaked in cotton wool, and this is the applicator) it gives a matt effect, but not only this, an effect of use is given which cannot be painted on.

I have also found that an aircraft already covered with this goes very well in a desert setting. If the finish needs changing, it can be easily wiped off with a damp cloth.

G. Catterall, Mottram, Cheshire.

Airfix Dakota

CIVIL airline modellers may like to know that the Airfix DC-3 *City of Oxford*, G-AMVY, was for some months on regular run from Blackpool to the Isle of Man. No longer bearing a name, she is now in standard British United finish, ie silver wings, tail plane and lower fuselage with a broad navy blue band along the windows separating the white roof and rudder. I found that the red 'British United' transfer from the Airfix BAC One Eleven sits quite satisfactory above the wing windows.

I have noted with interest the many requests for strange 'one-off' aircraft but I am not asking for a kit . . . merely the date of issue of the 'plane wanted by all—the Blenheim with sufficient parts and transfers to finish as a *Britain First*, a Mk 1, a long nose Mk IV, or the ground attack Bisley Mk V.

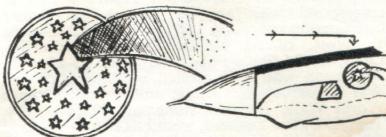
W. H. Hosker, Isleworth, Middx.

AIRFIX magazine

Colourful badge

WITH the introduction of camouflage into the USAF, squadron markings and colours are quickly becoming a thing of the past.

The USAF F4C and RF-4C Phantoms carry little or no squadron markings at all; however, readers might be interested to know that one unit, 22 Tac Recce Sqn of 26 Wing, based at Toul-Rosieres, France, did in fact carry their squadron badge on both sides of the nose, located just behind and slightly above the side camera windows.



The badge, 18 inches in diameter, consists of a blue circular field outlined in white and contains 21 small white stars with one large white one in the centre to total 22. From the large star shoots a trail of fire in the colours of red, orange and yellow, each colour fading into each other and fading out at the end of the yellow. I believe some aircraft still carry their badges but one by one the RF4Cs are being camouflaged.

R. Robinson, Rufforth, Yorks.

Metal surfaces

REFERRING to Mr Stuart Israel's letter in the July, 1966, issue of AIRFIX magazine I wish to complete his information about the painting of guns with some of my own experiences. Mixing black and silver is a very suitable procedure for painting all metal parts such as exhaust tubes and steel fittings of veteran airplanes, etc. Mixing silver with matt black in proper proportions gives the possibility of getting the effect more or less of a finished metal surface. A mixture of glossy black and silver is recommended for painting radial engines, as this paint renders all details more distinct and the final effect is more realistic, than when painting the engine with matt black.

Ivan Stepanek, Brno, Czechoslovakia.

Altering figures

AM I the only one, or has anyone else noticed the resemblance some of the faces of the moulds in the 1914 British Infantry set bear to Joseph Stalin? I noticed this when I was painting a set of figures I had bought and converted recently.

I now convert all my troops after my experience of ruining a scene when I built a group of 1946 British Infantry charging a German position by using unaltered British advancing figures. After all, when did you see a charge where, even if only for a moment, 30 figures were in exactly the same position?

What I now do, whenever I buy a box of figures, is leave one of each type as it is bought, and the rest I convert. There are various techniques, but briefly, these are mine. Most figures have at least two free limbs, and they can be altered at the thighs, knees, shoulders and elbows. However, these only allow a very few changes in position, and for greater variation, arms,

legs and body halves can be cut off, and replaced on different halves. This is done by sticking the limb on with either Bostik or UHU. I have found that these two cements are by far the best for holding this particular form of plastic. Changing the positions of the limbs of these figures is a delicate business, and needs a great deal of care, although the tools required are very simple. All you need is a sharp craft knife and a tube of body putty. You cut the joint of the part of the body you want to move, so that you can move the joint to the new position, and you then fill the gap with either plastic cement or body putty.

I was extremely pleased at the introduction of the World War I troops, although I thought it was a pity that the British troops were supplied with forage caps and not helmets. However this was largely rectified by C. O. Ellis' article in the August edition of your very helpful and informative magazine. I disagree, however, that it is necessary to behead the figure in order to replace the cap with a helmet, as this detracts from the lines of the figure, the detailing on the face of the 1914 figure being so much better than that of the 8th Army figure. If you remove the cap, and replace it with the helmet, you produce a much better figure. I also used the horses of the US Cavalry set, largely because there are 12 to a box, whereas there are only 3 in the Arab set.

Richard G. Maltby, Shirley, Warks.

Batmobile?

GOOD old Airfix, keep up the splendid work! What great kits Airfix manufacture, plus this great magazine. I have especially enjoyed constructing the superb Airfix MPC 1:24 scale cars, and now an Airfix James Bond Aston Martin.

What more can one wish? Answer: just one thing; I feel sure that the not-too-serious modeller would welcome, as a companion to the Aston Martin, a replica of the now famous Batmobile. How about it? Surely if it is as good as the DB5, it would prove irresistible. The prototype, a customised Lincoln Futura, appears each Tuesday and Wednesday on ITV at 6.7 pm. Good old Batman, not forgetting the boy wonder, Robin, of course.

Now to more serious topics: Airfix made a splendid job of the Junkers Ju52. Please, please (on behalf of numerous friends), is an Airfix Savoia Marchetti SM79 possible on the same lines, with optional markings and parts, etc. as in the Junkers?

That's two more suggestions. Now, the best of luck to Airfix and all concerned.

Philip A. Rogers, Uxbridge, Middx.

Heat-stretched sprue

IN the July issue of your magazine, Alan W. Hall showed beginners like myself how to stretch sprue to a useful size for use as spare fittings, etc.

While experimenting with two types of sprue, hexagonal and round, I found that the hexagonal sprue is better, owing to the fact that it does not break like the circular type. Is there any particular reason for this?

I would like to suggest that Airfix should produce an aeroplane kit with a clear fuselage to show the interior.

C. Durling, Rochester, Kent.

Rally models

THE cover of the August issue prompted me to write on a subject of growing interest; the conversion of Airfix models into racing or rally versions. The Lotus-Cortina, after being dirtied up with matt khaki and dark earth and having spare lights attached makes a very effective rally model.

Victor Truss, London N10.

Spaghetti spray

IN response to reader Ian Campbell's request for help in making wave mirror patterns, you may recall something printed in IPMS Newsheet 3, about using spaghetti for this purpose. The idea sounds stupid, but I have been told by several people that it really works.

First, spray the model in the wave mirror colour. While this is drying go to the grocery store and purchase a bag of spaghetti the shape and 'scale' that is required (the stuff that looks like a piece of insulated wire is the best. Vermicelli?).

Boil the spaghetti until it is pliable. If it gets too soft it will be useless as it will fall apart. Drain off the hot water and rinse with cold. Let the spaghetti sit a few minutes until it becomes tacky. Then use it like masking tape, applying light pressure with the fingers to 'set' it. It will follow any irregular surface and can be broken and re-formed to get the sharp curves.

After the spaghetti has been applied in the desired pattern, spray the model with the top coat colour. Remove the spaghetti and you should have a wave mirror pattern. Possibly noodles could be used to mask canopies!

James H. Sage, Director, IPMS, USA.

Belgian markings

IN the August issue of AIRFIX magazine, Monsieur Bevernage complains of the lack of Belgian markings. Belgian, or indeed any other roundels, can be produced by scribing three circles of varying diameters round a common centre in the correct place on a plastic aeroplane wing. The scribing is done very lightly with dividers and then the colours painted in. Using this method I have made a Finnish Folland Gnat, a French Boston, a New Zealand Kittyhawk and Beaufighter, and a SAAF Hart and Anson.

Scribing insignia is not confined to roundels, Estonian, Finnish pre-1944, Lithuanian and Czech can be made, but please scribe very lightly.

S. Widdows, Barnsley, Yorks.

What, no wheel?

I HAVE noticed that on the Royal Sovereign kit there is no steering wheel, could you please tell me why? Surely it should have one.

M. Jones, Reading, Berks.

There were no steering wheels in the 16th century. Ships were steered by a whipstaff which was fixed vertically to the tiller. This passed up through one or more decks and the helmsmen were placed in one of the poop decks where they could move the whipstaff from side to side in a slot, so moving the tiller.—Editor.

CONTINUED ON PAGE 70

Hucks starter

WITH reference to the Wapiti illustrated on page 312 (Photopage) of the June issue of the magazine, the machine is clearly an Army Co-operation aircraft as shown by the message pick-up hook and the broad (red) band around the tail end of the fuselage; 60 Squadron was not



Mr. Collins' Hucks starter at Karachi in 1928. This was carried on a Ford Model T chassis. Frame at the rear belongs to a parked truck.

Army Co-op. I hasten to add neither is the aircraft from my old unit (No 20 Army Co-Op Squadron, stationed in the '30s at Peshawar). Our Wapitis all had Jupiter VIII engines, whereas the picture clearly shows the characteristic rocker-boxes of the Jupiter VIIIIF engine normally fitted

to the Mk IIA Wapiti aeroplanes.

In the same issue (page 325) reader Butler would like a photo of the Hucks starter. I enclose one snap (reproduced here—ED.) which you may care to publish, and should be glad to furnish any other detail concerning the construction or handling technique of the Hucks, as in 1924 I regularly drove one when at No 2 Flying Training School, then at Duxford.

At that time the School was equipped with Bristol Fighters, Snipes, and Avro 504Ks (Monosoupape); only the first two required a Hucks for starting. In addition to normal starting up duties I was required to keep a sharp lookout for any Snipe or Bristol that had 'lost its prop' on landing (and this, quite likely, on the far side of the airfield—no runways in those days, nor perimeter track). As soon as I had spotted one such I had to pick up an air filter and forthwith drive out across the airfield and effect a re-start. Neither was flying stopped for me, nor was my Hucks painted a distinctive black and yellow. It was sometimes a hair-raising experience to have a Bristol shoot across my bows as I plugged over the grass!

R. A. Collins, (Flt Lt, Retd), Benfleet, Essex.

Chains

ONCE AGAINST readers of C. O. Ellis's military modelling articles in AIRFIX magazine may find the need for 1:67 scale chain. For example the Bergepanzer conversion in AIRFIX magazine, December 1965, in which it was needed for a jib.

You can buy it in model shops for model railways, but a cheaper way is to ask your

mother to crochet a chain to the length required, using button thread, and then give it a light coat of silver paint. To give it a realistic effect use brown thread, letting it show through the paint in places.

David Poulter, Cambridge.

Pen-friends wanted

THE following readers have written to the Editor requesting pen-friends: R. Turner (17), of 13 Beecroft Road, Crofton Park, London SE4, would like a German or American pen-friend, male or female, who is interested in all aspects of plastic modelling, especially military vehicles. Tetsuro Ono (17), of 2-57 Shinanacho, Mizuho-ku Nagoya-shi, Japan, wishes to correspond with any British or US reader interested in collecting 1:72 scale aircraft models. T. West, of 62 Neville Street, Cleethorpes, Lincs, would like a pen-friend in the 13-15 years age group who is interested in ships of World War 2, military modelling, and aircraft of both World Wars. Spencer Stoneman, PO Box 134, Tanhape, New Zealand, would like to correspond with a 15-18 year old in England, interested in 1:72 scale model aircraft and OO/HO figures. A. Davis, 42 Wheelwright Road, Erdington, Birmingham, would like a pen-friend of his own age (12) in America who is interested in military and naval models and who would be willing to exchange unmade US kits for British kits. David Perry (15) would like a pen-friend of his own age in Finland, interested in military and aircraft models, soldiers and tanks, and possibly a future holiday exchange. He would also like pen-friends in Poland, East Germany, or Czechoslovakia willing to exchange kits. His address: Creden, Lansdown Road, Cheltenham, Glos. A. Wallace, of 127 Thornton Road, Cambridge, would like a 12-14 year old pen-friend in the USA, interested in the American Civil War, the Revolutionary War and, possibly, World War 1. Iain Hughes, of 143 Acre Lane, Cheadle Hulme, Cheadle, Cheshire, is interested in making contact with pen-friends of any age in any country, with a view to exchanging photos of aircraft and aviation magazines.

Want to be a construction boss?

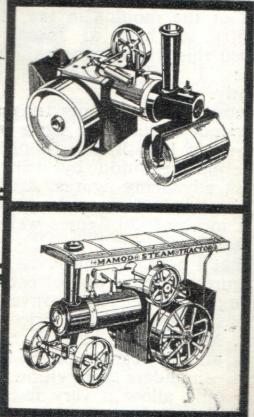
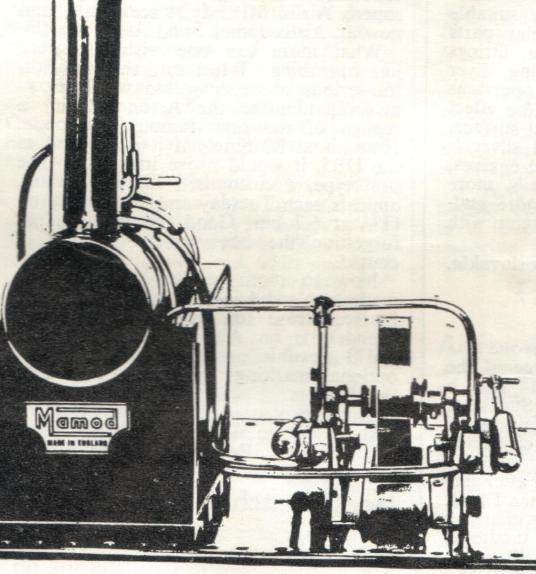
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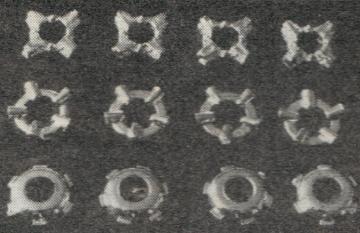
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ARE YOU A KIT CONVERTER?

We have many letters from readers requesting back copies of **AIRFIX MAGAZINE** containing conversion articles. Back copies of many issues are still available for the benefit of readers who may have missed or mislaid earlier editions. For example, here are some of the practical articles which have appeared in recent issues.

1963: January—Defiant target tug conversion.
July—Heinkel 111Z glider tug conversion.

1964: September—Bren gun carriers.
November—Conversions with the Airfix Centurion. 1965: June—Building a Hector from the Airfix Hawker Hart. July—Motorising the Airfix City of Truro. September—Jeeps. October—Modifying the Airfix Gladiator. November—Ajax cruiser and Lightning conversions. 1966: March—Firefly Profile. June—Four-stacker destroyers. July—Phantom RF-4C.

Would readers please note that the following is a revised list of issues that are out of print: all 1960 editions; January, February, March, April, May, June, July, August, 1961; January, February, October and November, 1962; February, March, April, August, September, October and November, 1963; January, February, March, April, May, June, July, August, September, October and December, 1964; January, February, March, April, May, June, July, August, September and December, 1965; January, February, April and May, 1966.

Back copies cost 1s 6d each (including postage) for all issues up to and including August, 1963. From September, 1963, onwards, the cost is 2s per issue, post paid. Please address all requests for back copies, together with your remittance, to our circulation department at **SURRIDGE, DAWSON (PRODUCTIONS) LTD**, 136/142 NEW KENT ROAD, LONDON SE1.